

## STIC Search Report Biotech-Chem Library

### STIC Database Tracking Number: 94446

TO: Christine Saoud

Location:

Art Unit: 1647 May 30, 2003

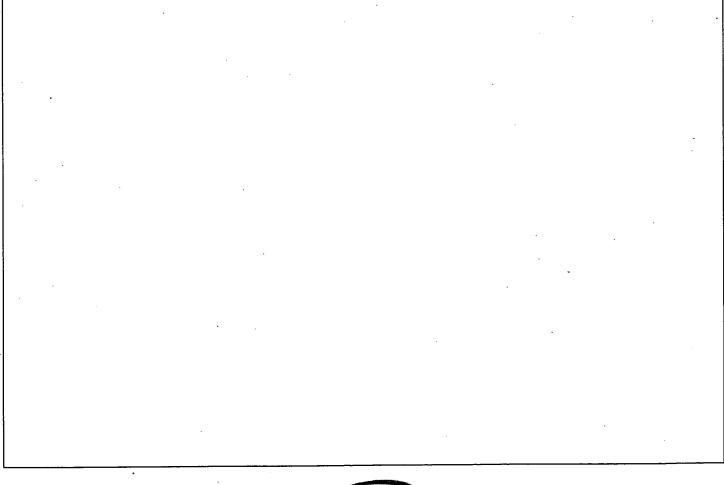


Case Serial Number: 901938

From: P. Sheppard Location: CM1-1E03 Phone: (703) 308-4499

sheppard@uspto.gov

### Search Notes





#### TIC-Biotech/Ch mLib

From: Sent: To:

Saoud, Christine Tuesday, May 20, 2003 10:35 AM STIC-Biotech/ChemLib

sequence search

MAY 20 2003

09/901,938

Subject:

(STIC)

Please search SEQ ID NO:1 and 2 in the patent and commercial databases (no interference, please).

Thank you,

Christine Saoud A.U. 1647 CM1 - 10E03 305-7519 mailbox in 10B19

> Point of Contact P. Sheppard Telephone number: (703) 308-4499

Searcher:	
Phone:	
Location:	
Date Picked Up:	
Date Completed: 3/30/43	
Searcher Prep/Review:	
Clerical:	
Online time:	

TYPE OF SEARCH:
NA Sequences:
AA Sequences:
Structures:
Bibliographic:
Litigation:
Full text:
Patent Family:
Othor

/ENDOR/COST (where applic.)
STN:
DIALOG:
Questel/Orbit:
DRLink:
Lexis/Nexis:
Sequence Sys.:
WWW/Internet:
Other (specify):

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

987	<b>4. 1U</b> 10	426	Result
1151 912 798	1238.4 1211 1211	1612 1598 1256	Score
71.4 56.6 49.5	76.8 75.1	100.0 99.1 77.9	% Query Match
13200 1973 996	1240 1211 1211	1612 2770 2749	% Query Match Length DB
21	222	24	BB
ABL50582 AAC61159 AAS21376	AAH64781 AAH28133 ABA97195	ABK48318 ABL50577 AAC61157	ID
Human 057311 genom Human fibroblast g Human cDNA sequenc	Human secreted pro Nucleotide sequenc	cDNA encoding huma Human OST311 polyn Human fibroblast g	Description

WO200208271-A1.

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ABL88110	ABL95599	AAF72382	AAC87022	AAF58498	AAA30028	AAC58599	AAV72455	AAX28430	AAX52224	ABL91719	AAF76715	AAD09152	AAF89921	ABL50580	ABL50581	AAH75032	AAH75022	ABK48319	ABL50579	AAC61156	ABA97196	AAH28134	AAC61160	AAC61158	AAC61155	ABL50654	ABL50578	ABL50653	AAH76317	ABL91738	ABN81575	ဒ	AAH75021	1636	AAF44266
Human PRO533 cDNA	Human angiogenesis	Human PRO533 cDNA.	Nucleotide sequenc	PRO533 coding sequ	PRO533		Human PRO533 cDNA.	FGF homologue PRO5	Protein PRO533 cDN	Human polynucleoti	fibroblast	<ul> <li>Human fibroblast g</li> </ul>	æ	۳	$\mathbf{r}$	Nucleotide sequenc	Nucleotide sequenc	cDNA encoding mous	Human OST311 polyn	Monkey fibroblast	Human zFGF12 degen	Degenerate sequenc	Human fibroblast g	Human fibroblast g		MK-OST311 DNA sequ	Human OST311 polyn	ST311 DNA se		~	Human FGF23 protei	Nucleotide sequenc	Nucleotide sequenc		Human PRO9828 nucl

### ALIGNMENTS

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RESULT 1
ABK48318
      Fibroblast growth factor 23; FGF23; hypophosphataemic disorder; autosomal dominant hypophosphataemic rickets, ADHR; fibrous dysplasia; X-linked hypophosphataemic rickets; XLH; tumour induced osteomalacia; TIO; hereditary hypophosphataemic rickets with hypercalciuria; HHRH;
                                                                                                                                                                                                hypophosphataemic bone disease; HBD; epidermal nevus syndrome; nephrolithiasis; hyperphosphataemic disorder; mild renal insufficiency; tumoural calcinosis; osteoporosis; dermatomyositis; human; gene; ss.
                                                                                                                                                                                                                                                                                                                      cDNA encoding human fibroblast growth factor-23 (FGF23).
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/note= "Fibroblast growth factor 23"
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The invention describes an isolated polypeptide (I) comprising a C fibroblast growth factor 23 (FGF23) polypeptide or its mutant, variant, chomologue or fragment. (I) is useful for treatment of a hypophosphatemic C disorder such as autosomal dominant hypophosphatemic rickets (ADHR), CC x-linked hypophosphateamic rickets (XIH), hereditary hypophosphateamic crickets with hypercalciuria (HHRH), hypophosphateamic bone disease (HBD), cpidermal nevus syndrome, fibrous dyplasia tumour induced osteomalacia (TIO), and nephrolithiasis. (I) can also be used in treatment of a CC hyperphosphateamic disorder such as mild renal insufficiency and tumoural CC calcinosis. Osteoporosis, conditions (e.g., dermatomyositis) involving CC deposition of calcium and phosphate in the arteries or soft tissues of CC described in the invention. Preferably, the nucleic acid or the CC described in the invention. Preferably, the nucleic acid or the CC polypeptide comprises a mutation that confers increased stability on CC FGF23 polypeptide. The polymucleotide encoding (I) can be used in gene CC therapy to treat diseased individuals. This sequence encodes the novel tuman fibroblast growth factor 23 (FGF23) studied in the invention.
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Best Local Similarity 100.

Matches 1612; Conservative
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                                                            CCCTGATGATCAGAICAGAGGATGCTGGCTTTGTGGTGATTACAGGTGTGATGAGCAGAA 420
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                                     The present invention describes DNA encoding a polypeptide having the activities of inhibiting hypophosphataemia, phosphate transport and calcification, and regulating vitamin D metabolism in vivo. The polypeptide is of human origin (designated OST311) which is localised to chromosome 12p13, or is derived from this by addition, deletion and/or substitution of one or more amino acid residues. OST311 has osteopathic, rephrotropic, antihyperphosphataemic and cytostatic activities. The OST311 polypeptide regulates phosphorus transport and calcium metabolism. OST311 sequences can be used for the treatment and diagnosis of skeletal disorders such as bone cancer, bone formation abnormalities, vitamin D resistance, osteoporosis, Paget's disease and bone calcium deficiency, kidney disorders such as kidney function deficiency, renal phosphate calcament and the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-AUG-2000;
21-SEP-2000;
22-DEC-2000;
19-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polypeptides useful for regulating phosphate transport and calcium metabolism and DNA encoding them for treatment of phosphate and calcium metabolism disorders, including bone formation abnormalities and kidney
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vitamin D metabolism; hypophosphataemia;
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CCCTTCCACAGGAGGTCCTGTGAGAACCAACCTTTGAGGCCCAAGTCATGGGGTTTCACC
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                                                                                                  GGCACCCTCTTAACCCATCCCTCAGCAAACGCAGCTCTTCCCAAGGACCAGGTCCCTTG
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917 CAC	8	WPI; 2000-647346/62.
817 GGG	Дb	Curtis RAJ, Wrighton NC;
857 GGG	Ş	(MILL-) MILLENNIUM PHARM INC.
757 CCC	DЪ	02-APR-1999; 99US-0127534. 03-DEC-1999; 99US-0454470.
797 ÇÇÇ	γQ	27-MAR-2000; 2000WO-US08076.
697 CCG	DЬ	12-OCT-2000.
737 ÇÇG	Q.	WO200060085-A1.
637 CAC	שמ	Homo sapiens.
677 CAC	Ş	haematopoietic disorder; myeloproliferative disorder; human; ss.
577 CCT	дb	amylotrophic lateral sclerosis; progressive supranuclear palsy; epilepsy; Creutzfeldt-Jakob disease; hepatic disorder; cardiovascular disorder;
617 CCT	Q	leukaemia; tumour angiogenesis; skeletal dysplasia; Alzheimer's disease; neurodegenerative disorder; Parkinson's disease; multiple sclerosis;
517 TCT	Db	Fibroblast growth factor-20; FGF-20; cytostatic; nootropic; metastasis;
557 TCT	δ	Human fibroblast growth factor-20 (FGF-20) cDNA sequence.
457 CCA	В	07-FEB-2001 (first entry)
497 CCA	8	AAC61157;
397 TTT	дь	AAC61157 standard; cDNA; 2749 BP.
437 TTT	8	OLT 3
337 AGA	Db	
377 AGA	δλ	CTCAGCCTCCCTACAGGGTGAGCACCTTCTGTCTCGCT
277 GGA	, Ъ	1612
317 GAA	\$	1501 TGAAAACTTGACAGACTTGATGCTTGCTGAAAATGAGGCAGGAATCATAATAGAAAA 1560
Best Local Matches 127	<b>≥</b> ∞ ×	
doteM vraid		1455 CCTTCGTTCTTCCTTGAGCATCTCTGGGGAAGAGCTGTCAAAAGACTGGTGGTAGGCTGG 1514
Sections	s X	
hepatic myelopro	888	1395 TGTGCAAACCTTGACATTAACAGCTGAATGGGGCAAGTTGATGAAAACACTACTTTCAAG 1454
Parkinso	388	1321 GAAGCTTCTCCACTGCCCTATGCATTTATGTTAGATGCCCCGATCCCACTGGCATTTGAG 1380
cancers	388	1335 GAAGCTTCTCCACTGCCCTATGCATTTATGTTAGATGCCCCGATCCCACTGGCATTTGAG 1394
diagnose	38	1261 GCAGTGGGTTCCTGAGCTCAAGACTTTGAAGGTGTAGGGAAGAGGAAATCGGAGATCCCA 1320
and hepa	88	12/3- GCAGTGGGTTCCTGAGCTCTAGACCTTTGAAGGTGTAGGGAAGAGGGAAATCGGAGATCCCA 1334
polynucl	88	
factor-2	នួន	1215 GCCTCTCCTTTTATCACTTTTAAGCATAAAAAAAAAAAA
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Claim 1:	PS XX	1155 AATTTCCCCTTCATGAAGGTAGAGAGAGAGGGGTCTCTCCCAACATATTTCTCTTTCCTTGT 1214
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P-PSDB;	l DR	1021 CCCTTCCACAGGAGGTCCTGTGAGAACCAACCTTTGAGGCCCAAGTCATGGGGTTTCACC 1080

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P-PSDB; AAY85638.

Novel nucleic acids encoding fibroblast growth factor-20, useful for detecting and modulating FGF-20 and for treating, e.g. cancer, neurodegenerative disorders, hepatic disorders and cardiovascular

Claim 1; Fig 9; 149pp; English.

cytostatic; nootropic; neuroprotective; antiparkinsonian; anticonvulsant and hepatotropic activity. The peptides, nucleotides and their binding agents my be used to modulate the expression or activity of FGF-20, or to diagnose aberrant FGF-20 expression. FGF20 activity or expression may be down-regulated to treat proliferative or differentiative disorders (e.g. cancers and leukaemia), tumour angiogenesis and metastasis, skeletal dysplasia, neurodegenerative disorders (e.g. Alzheimer's disease, parkinson's disease, multiple sclerosis, amylotrophic lateral sclerosis, progressive supranuclear palsy, epilepsy or Creutzfeldt-Jakob disease), hepatic disorders, cardiovascular disorders and haematopoietic and/or myyeloproliferative disorders. Polynucleotide sequences AAC61155-C61160 encode fibroblast growth factor-20 (FGF-20) proteins AAY85637-Y85639. The invention includes FGF-20 sequences isolated from humans and monkeys. Proteins, polynucleotides, agonists and antagonists of the invention have ç

Sequence 2749 BP; 747 A; 645 C; 633 G; 724 T; 0 other;

Length

2749;

397 277 757 797 697 737 637 677 577 517 557 457 497 437 337 377 / Match 77.9%; Score 1256; DB 21; Local Similarity 98.1%; Pred. No. 5.5e-293; nes 1271; Conservative 0; Mismatches 25; CACCCTCTTAACCCATCCCTCAGCAAACGCAGCTCTTCCCAAGGACCAGGTCCCTTGAC GGGAACGGGCCCGGAAGGCTGCCGCCCCTTCGCCAAGTTCATCTAGGGTCGCTGGAAGGG CCGGATGACCCCGGCCCCCGGCCTCCTGTTCACAGGAGCTCCCGAGCGCCGAGGGACAACAG CACCCGGAGCGCCGAGGACGACTCGGAGCGGGACCCCCTGAACGTGCTGAAGCCCCGGGC CCTGTCCCGGAGGAACGAGATCCCCCTAATTCACTTCAACACCCCCATACCACGGCGGCA CCTGTCCCGGAGGAACGAGATCCCCCTAATTCACTTCAACACCCCCCATACCACGGCGGCA CCAGACGCTGGAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAG TTTCAGAGGCAACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACA TTTCAGAGGCAACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACA GGATGGCAATGAGTCTTTGCCCTGCCTGTTTTTCTCCATAGGTGCCCTGATGATCAGATC GGGAACGGGCCCGGAAGGCTGCCGCCCCTTCGCCAAGTTCATCTAGGGTCGCTGGAAGGG CCGGATGACCCCGGCCCCGGCCTCCTGTTCACAGGAGCTCCCGAGCGCCGAGGACAACAG CACCCGGAGCCCGAGGACGACTCGGAGCGGGACCCCCTGAACGTGCTGAAGCCCCCGGGC CCAGACGCTGGAAAAACGGGTACGACGTCTACCACTCCTCAGTATCACTTCCTGGTCAG AGAGGATGCTGGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGA AGAGGATGCTGGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGA 436 GAATGGCCATGTGGATGGCGCACCCCATCAGACCATCTACAGTGCCCTGATGATCAGATC 376 Indels 0; Gaps 976 916 876 816 336 756 696 636 676 576 616 516 556 456 496 396 0

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06-MAR-2000; 2000US-0187470
                                                                   07-DEC-2000; 2000WO-IB01938
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cc they encode may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate GENSET gene expression. For example, they be used to treat disorders associated with decreased GENSET gene expression by rectifying mutations or deletions in a patient's genome that affect the activity of GENSET or by supplementing the patient's genome that affect the activity of GENSET or by supplementing the patients own production of GENSET polypeptides. Conversely, cc antisense nucleic acid molecules may be administered to down regulate GENSET expression by binding with the cells' own genes and preventing their expression. The sense and antisense nucleic acids may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acid sequences in samples, and hence to determine which patients may be used as antigens in the production of antibodies and in assays to identify modulators (agonists and continued and continued and continued and activity. The present sequence is a GENSET polypeptide expression and activity. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety of diseases, and for diagnosis of those diseases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to full length GENSET human nucleic acids encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-367870/38.
P-PSDB; AAG89178.
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Sequence 1240 BP; 292 A; 383 C; 325 G; 240 T; 0 other;

Query Match Best Local Matches 1239;

Match 76.8%; Local Similarity 99.9%;

Score 1238.4; DE Pred. No. 7e-289;

DB 22;

Length 1240;

Conservative

8 S 밁 Ş 밁 S 밁 Ś 맑 Ś 뭉 δ 밁 Ś 밁 á 문 Ś 561 481 501 421 441 361 381 301 321 241 261 181 201 121 141 61 18 21 -GATGCTGGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTC GGCCATGIGGATGGCCCACCCCATCAGACCATCTACAGTGCCCTGATGATCAGATCAGAG AGTCTAGGATCCTCACACCAGCTACTTGCAAGGGAGAAGGAAAAAGGCCAGTAAGGCCTGG GGCCGGGCGAAGAGAGCCTTCCTGCCAGGCATGAACCCCACCCCGTACTCCCAGTTCCTG ACGCTGGAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTG ACGCTGGAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTG AGAGGCAACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCAG GATGCTGGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTC GGCACGATGTTGGGGGCCCGCCTCAGGCTCTGGGTTCTGTGCCTTGTGCAGCGTCTGCAGC AGAGGCAACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCAG GGCCATGTGGATGGCGCACCCCATCAGACCATCTACAGTGCCCTGATGATCAGATCAGAG CTGATCCACCTGTACACAGCCACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAAT CTGATCCACCTGTACACAGCCACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAAT ATGAGCGTCCTCAGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGTGGC ATGAGCGTCCTCAGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGTGGC GCCAGGAGAGTCCCGACAGGAGTGTCAGGTTTCAATCTCAGCACCAGCCACTCAGAGCAG GCCAGGAGAGTCCCGACAGGAGTGTCAGGTTTCAATCTCAGCACCAGCCACTCAGAGCAG AGTCTAGGATCCTCACACCAGCTACTTGCAAGGGAGAAGGAAAGGCCAGTAAGGCCTGG 0; Mismatches 1; Indels 0; Gaps 620 540 560 440 80 480 500 420 360 380 300 320 260 180 200 120 140 240 60 0

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                                                                                                                                                                                                                                                                      Pibroblast growth factor; PGF; zFGF12; chromosome 12; 12q.1.3; neuronal cell; prostatic cell; pancreatic cell; haematopoietic cell; hyperplasia; regeneration; diabetes; amylotrophic lateral sclerosis; stroke; angiogenesis; wound healing; ss.
                                                                                                                                                                                                                                                                                                                                                                                             Nucleotide sequence of fibroblast growth factor homologue zFGF12.
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GTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGCAACATT

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301

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TACACAGCCACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAATGGCCATGTGGAT

TACACAGCCACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAATGGCCATGTGGAT

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Chomologue, designated zFGF12. The zFGF12 polypeptides contain a motif
C(see AAB84654) that occurs in all known members of the FGF family, which
cis unique to these proteins. This motif is highly conserved in all
CC members of the FGF family, however, zFGF12 appears to be unique in that
ct the conserved Glu is a His (residue 117) substituting a basic amino
acid (aa) residue for an acidic aa residue. The zFGF12 gene is mapped
ct chromosome 12, location 12q.1.3. zFGF12 may be used in the
currention, diagnosis and treatment of diseases associated with
inappropriate FGF expression: Disorders and processes that may be
currented, diagnosed, and treated include, for example proliferation
cof neuronal, prostatic and pancreatic tissue cells, growth and
currently dispersion of haematopoietic cells, hyperplasia and regeneration,
cdiabetes, amylotrophic lateral sclerosis, strokes, angiogenesis and
                                                                                                                                                                                                                                                                                            Matches 1211;
                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                          Sequence 1211
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 16;
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                                                GGGGCCCGCCTCAGGCTCTGGGTCTGTGCCTTGTGCAGCATGAGCGTCCTC
                                                                                   GGGCCCGCCTCAGGCTCTGGGTCCTGTGCCTTGTGCAGCGTCTGCAGCATGAGCGTCCTC
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AGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGTGGCCTGATCCACCTG
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                                                                                                                                                                                                                                                                                          75.1%; Score 1211; DB 22; Length ilarity 100.0%; Pred. No. 2.8e-282; Conservative 0; Mismatches 0; Indels
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                designated zFGF12, comprising a sequence at least 95 % identical to residues 25 to 251 of the 251 amino acid sequence, given in the specification. The activity of the fibroblast growth factor of the invention may be described as vulnerary. zFGF12 can be used to promote wound healing of the epidermis, to protect and promote recovery of epithelial cells in the gastrointestinal tract, small intestine and oral mucosa after chemotherapy or radiation, and to stimulate lung prithelial cells after lung injury or complications in neonates following premature birth. The polypeptide can also be used to modulate proliferation and function of epithelial cells of prostate, cornea, mammary and kidney tissue. The polypeptide is also useful to stimulate proliferation of cultured mesenchymal cells and to identify new family members. The
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1211 BP; 273 A; 380 C; 321 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New fibroblast growth factor, designated zFGF12 is for promoting wound healing, protecting and stimulating epithelial cells after chemotherapy or radiation, and stimulating lung epithelial cells after premature
                                                                                                                                                                                                                                                                                                                                                                                                                                 current sequence represents the human zFGF12 encoding sequence
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                                                                                                                                      GGGGCCCGCCTCAGGCTCTGGGGTCTGTGCCCTTGTGCAGCGTCTGCAGCAGCATGAGCGTCCTC
                                                                                                                                                                                                                                                      TCACACCAGCTACTTGCAAGGGAGAAGGAAAAGGCCAGTAAGGCCTGGGCCAGGAGAGTC
                                                                   AGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGTGGCCTGATCCACCTG
                                                                                                                GGGGCCCGCCTCAGGCTCTGGGGTCTGTGCCTTGTGCAGCGTCTGCAGCATGAGCGTCCTC
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DB; ABB08352.
                                           AGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGTGGCCTGATCCACCTG
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11-AUG-2000; 2000JP-0245144.
21-SEP-2000; 2000JP-0287684.
22-DEC-2000; 2000JP-0391077.
19-APR-2001; 2001JP-0121527.
                                                                                                                                                                                                                                                                                                                                                                                                                                  gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                           bone formation abnormality; vitamin D resistance; Paget's disease; bone calcium deficiency; kidney disorder; kidney function deficiency; renal phosphate leakage; urinary tubule acidosis; Fanconi's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OST311; phosphoric acid metabolism; calcium metabolism; calcification; vitamin D metabolism; hypophosphataemia; phosphate transport; cytostatic; chromosome 12p13; osteopathic; nephrotropic; antihyporphosphataemic; phosphorus transport; skeletal disorder; bone cancer; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                         21-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                            WO200214504-A1
                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                  phosphate leakage;
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Polypeptides useful for regulating phosphate transport and calcium metabolism and DNA encoding them for treatment of phosphate and calcium metabolism disorders, including bone formation abnormalities and kidney 2002-227350/28 'n Shimada T, Mizutani Ś Fukumoto

Claim 20; Page 172-187; 221pp; Japanese

nephrotropic, antihyperphosphataemic and cytostatic activities. The OST311 polypeptide regulates phosphorus transport and calcium metabolism. OST311 sequences can be used for the treatment and diagnosis of skeletal disorders such as bone cancer, bone formation abnormalities, vitamin D resistance, osteoporosis, Paget's disease and bone calcium deficiency; kidney disorders such as kidney function deficiency, renal phosphate leakage, urinary tubule acidosis and Fanconi's disease. The present sequence is used in the exemplification of the present invention. The present invention describes DNA encoding a polypeptide having the activities of inhibiting hypophosphataemia, phosphate transport and calcification, and regulating vitamin D metabolism in vivo. The polypeptide is of human origin (designated OST311) which is localised to chromosome 12p13, or is derived from this by addition, deletion and/or substitution of one or more amino acid residues. OST311 has osteopathic, y the

Sequence 13200 BP; 3710 A; 2982 C; 2903 G; 3605 T; 0 other;

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                                                                                                                                                                      CACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTGGAAAACGGGTACGAC 521
CTAATTCACTTCAACACCCCCATACCACGGCGCACACCCGGAGCGCCGAGGACGACTCG
             CTAATTCACTTCAACACCCCCATACCACGGCGGCACACCCGGAGCGCCCGAGGACGACTCG
                                                 CTGCCAGGCATGAACCCACCCCGTACTCCCAGTTCCTGTCCCGGAGGAACGAGATCCCC
                                                                   CTGCCAGGCATGAACCCACCCCCGTACTCCCAGTTCCTGTCCCGGAGGAACGAGATCCCC
                                                                                                    GTCTACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTGGGCCGGGCGAAGAGAGCCTTC
                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                     Score 1151; DB 24;
Pred. No. 2.3e-267;
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RESULT 7 ABL50582

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                                                                               TTGCTGAAATGAGGCAGGAATCATAATAGAAAACTCAGCCTCCCTACAGGGTGAGCACCT
                                                                                                                                            GGAAGAGCTGTCAAAAGACTGGTGGTAGGCTGGTGAAAACTTGACAGCTAGACTTGATGC
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                              TCTGTCTCGCT
                                                                                                                        GGAAGAGCTGTCAAAAGACTGGTGGTAGGCTGGTGAAAACTTGACAGCTAGACTTGATGC
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RESULT 8
AAC61159
ID AAC6
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AC AAC6
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AC AAC6
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O7-F

AAC61159 standard;

CDNA; 1973

07-FEB-2001 AAC61159

(first entry)

1202

CCAGACGCTGGAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAG

1261

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                                                                                                                                                                                                                                                                                                                                         Polynucleotide sequences AAC61155-C61160 encode fibroblast growth (FGF-20) (FGF-20) proteins AAY85637-Y85639. The invention includes FGF-20 sequences isolated from humans and monkeys. Proteins, polynucleotides, agonists and antagonists of the invention have cytostatic; noctropic; neuroprotective; antiparkinsonian; anticonvulsant and hepatotropic activity. The peptides, nucleotides and their binding agents my be used to modulate the expression or activity of FGF-20, or to diagnose aberrant FGF-20 expression. FGF20 activity or expression may be down-regulated to treat proliferative or differentiative disorders (e.g. cancers and leukaemia), tumour angiogenesis and metastasis, skeletal dysplasia, neurodegenerative disorders (e.g. Alzheimer's disease, Parkinson's disease, multiple sclerosis, amylotrophic lateral sclerosis, progressive supranuclear palsy, epilepsy or Creutzfeldt-Jakob disease), hepatic disorders, cardiovascular disorders and haematopoietic and/or myeloproliferative disorders.
                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 927; Conserv
                                                  1142
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                                                                                                                                                                                                                                                                                                                                       Sequence 1973 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel nucleic acids encoding fibroblast growth factor-20, useful detecting and modulating FGF-20 and for treating, e.g. cancer, neurodegenerative disorders, hepatic disorders and cardiovascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        leukaemia; tumour angiogenesis; skeletal dysplasia; Alzheimer's disease; neurodegenerative disorder; Parkinson's disease; multiple sclerosis; amylotrophic lateral sclerosis; progressive supranuclear palsy; epilepsy; Creutzfeldt-Jakob disease; hepatic disorder; cardiovascular disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Fig 10; 149pp; English
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03-DEC-1999;
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CCAGACGCTGGAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAG
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DB; AAY85639.
                                              TTTCAGAGGCAACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACA
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eletal dysplasia; Alzheimer's disease;
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                                                                          TTTCCCCTTCATGAAGGTAGAGAGAAGGGGGTCTCTCCCAACATATTTCTCTTCCTTGTGC 1216
                                                                                                               CTTCCTCACTCCATATAGAACACCTTTCCCAATAGGAAACCCCAACAGGTAAACTAGAAA
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                                                                                                                                                                                             CTTCCACAGGAGGTCCTGTGAGAACCAACCTTTGAGGCCCAAGTCATGGGGTTTCACCGC 1096
CTTCCACAGGAGGTCCTGTGAGAACCAACCTTTGAGGCCCAAGTCATGGGGTTTCACCGC
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                                                       TTTCCCCTTCATGAAGGTAGAGAGAGGGGTCTCTCCCAACATATTTCTCTTCCTTGTGC
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24-FEB-2000; 24-FEB-2000; 01-MAR-2000; 20-MAR-2000; 21-MAR-2000; 30-MAR-2000; 17-MAY-2000;

2000WO-US07377

2000WO-US04914 2000WO-US05004

2000WO-US04414 2000WO-US04342 2000WO-US03565 2000WO-US04341

2000WO-US07532. 2000WO-US08439. 2000WO-US13705.

2000WO-US14042

18-FEB-2000;

2000WO-US00277 2000WO-US00376

99WO-US31243 99WO-US30999 99WO-US30911 99WO-US30095. 99US-0170262

Gerritsen Baker

Beresini M, Deforge L, Desnoyers L, Filvar ME, Goddard A, Godowski PJ, Gurney AL, She Stewart TA, Tumas D, Watanabe CK, Wood WI,

Filvaroff E, L, Sherwood S;

Gao W;

Zhang Z;

(GETH ) <del>\</del>

GENENTECH INC

WPI; 2001-408281/43. P-PSDB; AAU12304.

Isolated, secretory and transmembrane PRO polypeptide used to detect other PRO polypeptides, link bioactive molecules to cells expressing PRO polypeptides, and detect the presence of mammalian tumours e.g. lung, breast, prostate, cervical

Claim 3; Fig 265; 813pp; English.

AAS21376 standard; CDNA; 996 ВÞ

24-OCT-2001 (first entry)

Human cDNA sequence encoding for PRO9828 polypeptide.

RESULT 9
AAS21376
ID AAS2
XX AAS2
XX AAS2
XX Huma
XX Huma
XX Huma
XX Huma
XX Homc
XX H breast; prostate; cervical; tumour necrosis factor-alpha; TNF-alph cartilage; ear; proliferation; glucose; free fatty acid; skeletal Human secretory and transmembrane; PRO; mammalian; cancer; A-peptide; factor VIIA; gene therapy; ss. TNF-alpha; muscle;

07-JUN-2001.

01-DEC-2000; 2000WO-US32678.

CA AAS21244-AAS21518 encode for novel human secretory and transmembrane CC PRO polypeptides. The PRO polypeptides are useful to detect other CC PRO polypeptides, to link bioactive molecules to cells expressing CC PRO polypeptides, to modulate biological activities of cells expressing CC PRO polypeptides, and to detect the presence of mammalian lung, colon, CC breast, prostate, rectal, cervical or liver tumours by comparing PRO polypeptide expression in a cell sample to that in a control sample. CC some of the 275 sequences are also useful to stimulate the release of CC tumour necrosis factor-alpha (TNF-alpha) from human blood, the crowdifferation or differentiation of chondrocytes, the proliferation or colliferation or colliferation of cromposities, the proliferation of control supporting cells or CC artilage, the proliferation of inner ear utricular supporting cells or CC of T-lymphocytes, the release of a cytckine from peripheral blood CC monocytes (PBMCs), or the proliferation of endothelial cells. Some of CC the PRO polypeptides may modulate glucose or free fatty acid uptake by CC skeletal muscle cells or by adipocytes; or inhibit binding of A-peptide CC molecules involved in binding interactions. The polymucleotides encoding CC PRO polypeptides can be used in assays to identify CC molecules involved in binding interactions. The polymucleotides encoding CC PRO polypeptides can be used in gene therapy.

Sequence 996 BP; 222 A; 320 C; 260 G; 194 T; 0 other;

Query Match Best Local Sim Matches 798; Similarity 100.0%; E 98; Conservative 0; 49.5%; Score 798; DB 22; ]
100.0%; Pred. No. 1.2e-182;
tive 0; Mismatches 0; Length 996;

S 114 AATCTCAGCACCAGCCACTCAGAGCAGGGCACGATGTTGGGGGCCCCGCCTCAGGCTCTGG 1.73

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                                                            Human; secreted ar cell death; cancer diagnostic assay;
                                                                                                                 Human PRO9828 nucleotide sequence
                                      Homo sapiens
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                                                                                                                                                                                               AAF44266 standard;
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Ferrara N, Fo
Grimaldi CJ,
Roy MA, Stewa
Zhang Z;
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16-DEC-1999;
20-DEC-1999;
05-JAN-2000;
06-JAN-2000;
11-FEB-2000;
18-FEB-2000;
22-FEB-2000;
                                                                                                               The present inverse proteins. The F
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15-SEP-1999;
08-OCT-1999;
30-NOV-1999;
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28-JUL-1999;
17-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-JUN-1999;
23-JUN-1999;
07-JUL-1999;
                                                                                                                                                                     PRO polynucleotides used to produce polypeptides used to target bioactive molecules such as toxins, radiolabels or antibodies, specific cells, to cause targeted cell death -
                                                                                                                                                                                                                                                               Ashkenazi .
Ferrara N,
                                                                                                                                                                                                           WPI; 2001-032160/04.
P-PSDB; AAB65297.
                                                                                                                                                     Claim
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24-FEB-2000;
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N, Fong S, Gerber H, Gerritsen ME, Goddard
i CJ, Gurney AL, Kljavin IJ, Napier MA, Pan
Stewart TA, Tumas D, Watanabe CK, Williams
                                                                                                                                  invention describes human secreted and transmembrane PRO
                                                                                                                                                                                                                                                                                                           99WO-US28301.
99WO-US30095.
99WO-US30091.
2000WO-US00219.
2000WO-US00376.
2000WO-US03365.
2000WO-US04341.
2000WO-US04414.
2000WO-US05401.
2000WO-US05801.
2000WO-US05801.
2000WO-US058084.
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99US-0146222.
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99WO-US21090.
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99WO-US28313.
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                                                                                                                                                                                                                                                                        Eaton
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Godowski PJ; Paoni NF; Wood WI; Paoni Wood

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proteins. The PRO proteins have cytostatic activity. The PRO proteins to can be used for targeted delivery of bloactive molecules, such as toxins, radiolabels or antibodies, that cause cell death. PRO mucleotide sequences, and their fragments, can be used as hybridisation probes, in chromosomal and gene mapping, and in the generation of anti-sense RNA and DNA. They may also be used to produce transgenic animals which are used to develop and screen therapeutically useful reagents. The PRO nucleotide and protein sequence can be used for tissue typing and in treating cancer. Anti-PRO antibodies can be used in diagnostic assays.

ANF44270 to ANF44470 represent PCR primers and hybridisation probes used in the isolation of human PRO sequences. ANF444089 and AAB65134 to ANB65300 represent human PRO polynucleotide and protein sequences given in the exemplification of the present invention. Sequence 996 BP; 222 A; 320 C; 260 G; 194 T; 0 other; Length 996;

Query Match Best Local ( Local Similarity 49.5%; Scilarity 100.0%; P Score 798; DB 22; I Pred. No. 1.2e-182; 0; Mismatches 0;

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Ś 밁 á Matches 174 199 114 GTCTGTGCCTTGTGCAGCGTCTGCAGCATGAGCGTCCTCAGAGCCTATCCCAATGCCTCC AATCTCAGCACCAGCCACTCAGAGCAGGGCACGATGTTGGGGGCCCCGCCTCAGGCTCTGG 173 AATCTCAGCACCAGCCACTCAGAGCAGGCACGATGTTGGGGGGCCCGCCTCAGGCTCTGG 798; Indels 0, Gaps 258 233

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RESULT 11

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                                                    Human; Alzheimer's disease; amyotrophic lateral sclerosis; ALS; Zollinger-Ellison syndrome; immune system disease; schizophrenia; inflammation; haematopoietic disease; anxiety; feeding disorder; aging; anorexia; depression; cardiovascular disease; sleep disorder; seizure; memory alteration; migraine; stroke; asthma; neuropathy; hypoglycaemia; sexual disorder; growth abnormality; infection; autoimmune disease; rheumatoid arthritis; catrarctogenesis; anglogenesis; atherosclerosis; cerebral ischaemia; cirrhosis; Huntington's disease; Hodgson's disease; hypercholesterolaemia; headache; amnesia; cardiac arrhythmia; obesity; diabetes mellitus; glomerulonephritis; renovascular hypertension;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-NOV-2001
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                               sbgFGF-19b gene;
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207 23

GTCCTCAGAGCCTATCCCAATGCCTCCCCACTGCTCGGCCTCCAGCTGGGGGTGGCCTGATC

266 60 206

GTCCTCAGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGCGTGATC

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Query Match Best Local Similarity

46.9%;

Score 756; Pred. No. 1

1.5e-172; DB 22; Η, 0 other;

Length 756;

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Gaps

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Sequence

756 BP; 159

A, 250

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G; 135

Matches

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ATGITGGGGGCCCCCCCAGGCTCTGGGTCTGTGCCTTGTGCAGCGTCTGCAGCATGAGC

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Mismatches

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CC The invention relates to secreted and membrane associated polypeptides CC and nucleic acid molecules encoding such polypeptides. Sequences of the CC invention are useful for treating diseases such as Alzheimer's disease, CC amyotrophic lateral sclerosis (ALS), Zollinger-Ellison syndrome, diseases CC of the immune system, haematopoietic disease, inflammation, anxiety, CC schizophrenia, feeding disorders, anorexia, depression, social, sexual CC and rewarded behaviour, cardiovascular disease, sleep disorder, learning CC and memory alteration and altered immune response, seizure, migraine, CC cancer, stroke, asthma, neuropathy, aging, sexual disorders, treatment CC of transsexuals, growth abnormalities, obesity, infections, autoimmune CC diseases (e.g. rheumatoid arthritis), cataractogenesis, angiogenesis, CC disorders associated with healthy maintenance of gastric mucosa and crepair of acute and chronic mucosal lesion, lung carcinoma, cerebral CC inchaemia, atherosclerosis, cirrhosis, Huntington's disease, headache, CC ammesia, multiple sclerosis, Hodgson's disease, dilated cardiomyopathy, CC congestive heart failure, cardiac arrhythmias, hypercholesterolaemia, CC viral and ono viral hepatitis, type I and type II diabetes mellitus, CC quarelyses, tendinitis and malignant hyperthermia. Polypeptides of the C invention are used to identify membrane bound and soluble receptors. CC paralyses, tendinitis and malignant hyperthermia. Polypeptides of the conversion studies and tissue terponse in a mammal. Polynucleotides of the invention are used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-FEB-2000;
29-FEB-2000;
18-APR-2000;
                                   expression studies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is a gene encod a secreted protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 2; Page 53-54; 94pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        disorders, stroke, and asthma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New secreted and membrane associated polypeptides for treating Alzheimer's disease, psoriasis, cancer, enterocolitis, sleep and sexual
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; 2000US-0198583.
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/product= "Human sbgFGF-19b protein"
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BEECHAM PLC.
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CCGGAAGGCTGCCGCCCTTCGCCAAGTTCATCTAG
                         CCGGAAGGCTGCCGCCCTTCGCCAAGTTCATCTAG
                                                                      AGTGACCCATTAGGGGTGGTCAGGGGGCGGTCGAGTGAACACGCCACGCTGGGGGAACGGC
                                                                                                                          CCGGCCCCGGCCTCCTGTTCACAGGAGCTCCCGAGCGCCGAGGACAACAGCCCCGATGGCC
                                                                                                                                                                              GCCGAGGACCACTCGGAGCGGGACCCCCTGAACGTGCTGAAGCCCCGGGCCCCGGATGACC
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                                                   GCCGAGGACTCGGAGCGGGACCCCCTGAACGTGCTGAAGCCCCGGGCCCGGATGACC
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                                                                                                                                                                                                                                                                      GCGAAGAGAGCCTTCCTGCCAGGCATGAACCCACCCCCGTACTCCCAGTTCCTGTCCCGG
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                                                                                                       CCGGCCCGGCCTCCTGTTCACAGGAGCTCCCGAGCGCCGAGGACAACAGCCCGATGGCC
                                                                                                                                                                                                                  AGGAACGAGATCCCCCTAATTCACTTCAACACCCCCATACCACGGGGGCACACCGGAGC
                                                                                                                                                                                                                                                                                                                             GAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTGGGCCGG
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AAH75021 standard; DNA; 756
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Location/Qualifiers
/*tag= a
/product= "fibroblast
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WO200166596-A2

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ARAFSULT 12
AAH75
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AAH75
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AC AAH75
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DT 29-OC
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Pibro
KW Fibro
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KW Conge
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KW Hintes
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fibroblast growth factor 23; FGF-23; injury; placental cell; ulcer; congenital defect; fertility; abnormal growth; thymus function; leukemia; lymphoma; autoimmune disease; proliferative disorder; differentiation disorder; central nervous system disease; inflammation; parkinson's disease; Alzheimer's disease; Crohn's disease; inflammation; intestinal wound; motility disorder; absorption disorder; stroke; congenital malformation; ischemic vascular disease; myocardial ischemia; peripheral vascular disease; renal artery disease; bone disease; musculoskeletal disease; skeletal myopathy; arthritis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleotide sequence of human fibroblast growth factor 23 (FGF-23).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-OCT-2001
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                                                                                                       growth factor 23
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08-MAR-2000; 2000US-0187854
18-SEP-2000; 2000US-0233368
05-DEC-2000; 2000US-0251649
                                                                                            Claim
                                                                                                                         WPI; 2001-522948/57.
P-PSDB; AAG63944.
                                                                                                    the thymus (e.g. leukemia) -
                                                                                                                                                                            07-MAR-2001; 2001WO-US07469
                                                                                                                                      Itoh N,
                                                                                                                                                                                     13-SEP-2001
                                                                                                                                               (KYOU
                                                                                                                                                   (CHIR )
                                                                                                                                              UNIV KYOTO.
                                                                                           Fig
                                                                                                                                      Kavanaugh MW;
                                                                                           3; 77pp; English.
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Isolated nucleic acids encoding the human and murine fibroblast growth factor 23, useful in the treatment of a condition characterized by inadequate function of placental cells (e.g. congenital defects) and

CC The present sequence encodes fibroblast growth factor 23 (FGF-23).

CC Human FGF-23 polynucleotides and polypeptides are useful for treating CC a patient suffering from traumatic injury or a condition characterized by dysfunction of or injury to skin cells, a condition characterized by CC inadequate function of placental cells (e.g. congenital defects, CC fertility, or abnormal growth), a condition characterized by inadequate function of the thymus (e.g. leukemia, lymphoma, autoimmune disease, CC proliferative disorder of the thymus, or differentiation disorder of the thymus, or differentiation disorder of the thymus, or differentiation disorder of CC the thymus), or a condition characterized by central nervous system CC disorder (e.g. Parkinson's disease or Alzheimer's disease). The human CC FGF-23 polynucleotide and polypeptide are also useful in the treatment CC of Crohn's disease, healing of intestinal wounds, ulcers, inflammation, CC injuries and surgical anastomoses, motility and absorption disorders, and congenital malformations of the intestine. They are also useful for CC treating ischemic vascular disease (e.g. myocardial ischemia/infarction, CC treating ischemic vascular disease, renal artery disease, stroke) and consculoskeletal disease, characterized by loss of function, inadequate CC function or death of skeletal muscle cells, bone cells or supporting CC cells (e.g. skeletal myopathies, bone disease, or arthritis).

Sequence 756 BP; 159 A; 250 C; 212 G; 135 T; 0 other;

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               AACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCCAGACGCTG
                                                                                                                           GTGGATGGCGCACCCCATCAGACCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCT
AACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTG
                                                                    GGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGC
                                                                                                          GTGGATGGCGCACCCCATCAGACCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCT
                                                                                                                                                                              CACCTGTACACAGCCACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAATGGCCAT
                                                                                                                                                                                                                    GTCCTCAGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGGTGGCCTGATC
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                                                                                                                                                                                                                                                                                                                                Conservative
                                                     IGATTACAGGTGTGATGAĞCAGAAGATACCTCTGCATGGATTTCAGAGGC
                                                                                                                                                                CACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAATGGCCAT
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                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                        Score 756; DB 22; I
; Pred. No. 1.5e-172;
                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                      Length
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                                                                                                                                                                                                                                                                                                                             0;
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RESULT 13
AAH75033
ID AAH75
XX AAH75
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XX Conge
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XX Homo
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                                                                                                                                                  08-MAR-2000;
18-SEP-2000;
05-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fibroblast growth factor 23; FGF-23; injury; placental cell; ulcer; congenital defect; fertility; thymus; leukemia; lymphoma; injury; autoimmune disease; proliferative disorder; differentiation disorder; central nervous system disorder; Parkinson's disease; inflammation; Alzheimer's disease; Crohn's disease; intestinal wound; stroke; motility disorder; absorption disorder; intestinal malformation; ischemic vascular disease; myocardial ischemia; myocardial infarction; peripheral vascular disease; renal artery disease; skeletal myopathy; musculoskeletal disease; skeletal muscle cell; bone disease; arthritis;
                                                                          (CHIR )
                                                                                                                                                                                                                                                      07-MAR-2001; 2001WO-US07468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-OCT-2001
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                       Itoh N,
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                       Kavanaugh MW;
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2000US-0233368.
2000US-0251650.
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1..756
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= a
/product= "fibroblast growth factor 23 (FGF-23)"
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DR P-PSDB; AAG63947.

NR P-PSDB; AAG63947.

NR P-PSDB; AAG63947.

NR Isolated nucleic acids encoding the human and murine fibroblast growth profector 23, useful in the treatment of a condition characterized by professor inadequate function of placental cells (e.g. congenital defects) and professor inadequate function of placental cells (e.g. congenital defects) and professor inadequate function of placental cells (e.g. congenital defects) are the thymus (e.g. leukemia).

CC The present sequence encodes fibroblast growth factor 23 (FGF-23).

CC The numan FGF-23 polymucleotide and polypeptide are useful for treating congenital defects of the thymus (e.g. condition characterized by inadequate function of placental cells (e.g. congenital defects, for injury to skin cells, a condition characterized by inadequate function of placental cells (e.g. congenital defects, congenital defects, for the thymus (e.g. leukemia, lymphoma, autoimmune disease, congenital defects, congenital condition characterized by central nervous system conditions characterized by central nervous system conditions characterized by central nervous system consider (e.g. Parkinson's disease or Alzheimer's disease). The human consider (e.g. Parkinson's disease or Alzheimer's disease). The human consider (e.g. Parkinson's disease, healing of intestinal wounds, ulcers, conference of the consideration of the intestine. They are also useful for treating ischemia vascular disease, renal consoration ischemia/infarction, peripheral vascular disease, renal consoration ischemia/infarction, peripheral vascular disease, renal consoration ischemia/infarction, peripheral vascular disease, renal consoration ischemia/infarction or death of skeletal muscle cells, cor arthritis).

Sequence 756 BP; 159 A; 250 C; 212 G; 135 T; 0 other:
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Ś 밁 Ş 밁 á 맑 밁 밁 8 Ş 밁 δ S Ś 맑 S 뮍 Query Match Best Local S Matches 756 Sequence 756 BP; 159 421 361 507 301 447 241 387 181 327 121 267 207 147 61 <u>بــ</u> GAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTGGGCCGG AGGAACGAGATCCCCCTAATTCACTTCAACACCCCCATACCACGGGGGGCACACCCGGAGC GAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACCTTCCTGGTCAGTCTGGGCCGG GGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGC GTGGATGGCGCACCCCATCAGACCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCT CACCTGTACACAGCCACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAATGGCCAT GTCCTCAGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGTGGCCTGATC GTCCTCAGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGTGGCCTGATC ATGTTGGGGGCCCCCCCTCAGGCTCTGGGTCTGTGCCTTTGTGCAGCGTCTGCAGCATGAGC GCGAAGAGAGCCTTCCTGCCAGGCATGAACCCACCCCGTACTCCCAGTTCCTGTCCCGG GCGAAGAGAGCCTTCCTGCCAGGCATGAACCCCACCCCCGTACTCCCAGTTCCTGTCCCGG AACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTG AACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTG GGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGC GTGGATGGCGCACCCCATCAGACCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCT CACCTGTACACAGCCACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAATGGCCAT ATGTTGGGGGCCCCCCCCAGGCTCTGGGTCTGTGCCTGTGCAGCGTCTGCAGCATGAGC 756; Similarity 46.9%; ilarity 100.0%; Conservative ( A; 250 C; 212 G; 135 T; 0 other; 0; Score 756; DB 22; I Pred. No. 1.5e-172; 0; Mismatches 0; 0; Indels Length 756; 0, Gaps 686 480 420 566 506 300 446 240 386 180 326 120 266 60 <u>,</u>

481

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RESULT 14
ABN81575
ID ABN81
XX ABN81
XX ABN81
XX ABN81
XX ABN81
XX Human
XX Human
XX Homo
XX FT CDS

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                                                                    Query Match
Best Local :
                                                 Matches
                                                                                                                                                                           The invention relates to a DNA (ABN81575) encoding a protein (ABB77581) PGF23 and mutants FGF23 comprising an amino-acid substitution of argining at position 176 to glutamine and/or position 179 to glutamine or tryptophan. The mutants are generated by introducing the following base changes in the nucleic acid sequence: R1760 mutant is generated by G527A; R179Q is generated by G535A; and R179W is generated by C535T. The protein and encoding DNA are applicable in remedies for hyperphosphataemia, including gene therapy.
                                                                                                                                         Sequence 756 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Human FGF23 applicable
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29-MAY-2001; 2001JP-0161370.
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                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 44-46; 64pp; Japanese.
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147 ATGTTGGGGGCCCGCCTCAGGCTCTGGGTCTGTGCCTTGTGCAGCGTCTGCAGCATGAGC 206
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                                                                       Local Similarity
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in gene therapy
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llarity 100.0%;
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/*tag= a
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Pred. No.
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09-JAN-2001; 2001DE-1000586

DE10100586-C1

PXXXXXXXXX

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The invention relates to a method for inhibiting expression of a target gene (ABL91658-ABL91797) in a cell by introducing at least one coligoribonucleotide that has a double-stranded structure consisting of at CC most 49 sequential nucleotide pairs, with at least part of one strand CC complementary with the target gene and has at least one end a CC single-stranded segment of 1-4 nt. The method provides CC cligoribonucleotides for antisense inhibition of gene expression useful c.g. for treating tumours but the oligoribonucleotides may also be CC directed against genes present in pathogens (e.g. Plasmodium or CC viruses/viroids, pathogenic on humans, animals or plants) or against CYTokine, Id, developmental or prion genes. The method provides more cffective inhibition of gene expression than use of known coligonucleotides, probably because the unpaired overhang increases coligonucleotides, probably because the unpaired overhang increases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 46.9%; Sc
Best Local Similarity 100.0%; p
Matches 756; Conservative 0;
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Search completed: May 29, 2003, Job time: 445 secs 00:01:36

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Database
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## ALIGNMENTS

REFERENCE AUTHORS RESULT 1 AG095702 LOCUS VERSION KEYWORDS COMMENT REFERENCE SOURCE ACCESSION DEFINITION TITLE JOURNAL JOURNAL TITLE AUTHORS ORGANISM Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (B-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of 2 (bases 1 to 719)
Fujlyama, A., Hattori, M., Toyoda, A., 'Totoki, Y., Watanabe, H. and Sakaki, Y. Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.

BAC end sequences of Library PTB Pan troglodytes male lymphoblast BAC Library clone: PTB-096N15.R. AG095702 719
Pan troglodytes DNA, clone:
AG095702 Direct Submission Unpublished Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan. Pan troglodytes AG095702.1 GI:16647544 719 9 bp DNA PTB-096N15.R, DNA, clone\_lib:PTB Chimpanzee Male Taylor, T.D., Yada, T., linear GSS 03-NOV-200 genomic survey sequence. GSS 03-NOV-2001

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RESULT 2
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                                                                                                                                                                                                                                               TCACTTTTAAGCATATAAAAAAAAAAAAAAAAAAAACA------GTGGGTTTCCTG 598
             musculus cDNA clone
BI789859
                                        BI789859 470 bp mRNA linear ic44d12.yl Melton Normalized Mixed Mouse Pancreas 1
BI789859.1 GI:15817584
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/clone lib="PTB Chimpanzee Male
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db_xref="taxon:9598"
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                                                                                             466 ATTTCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTGGAAAAACGGGTACGACGTCT
526 ACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTGGGCCGGGCGAAGAGAGCCCTTCCTGC
                                                          35
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                                                  ACTTCAGCCCAGAGAATTGCAAGTTCCGCCAGTGGACGCTGGAGAATGTCTATGACGTCT
                                                                                                                                                          301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seq primer: -40RP from Gibco
High quality sequence stop: 458
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Library was constructed by Dr. Douglas Melton DNA s
Washington University Genome Sequencing Center For
obtaining a clone please contact: Juliana Brown
(brown@fas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y., and Bowers, Y.
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Melton,D., Brown,J., Kenty,G., Lemishka,I., Scearce,M., Bresto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGI:1942717 This sequence now available from the for clone orders contact: info@image.llnl.gov
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                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                       75
                                                                                                                                                                                                                                                                            fractionation. Libraries were amplified once on solid support and plasmid DNA from each library was prepared and mixed in equal amounts. The mixed library DNA was normalized by method #4 from Bonaldo, Lennon, and Soares 1996 Genome Research 6:791-806; 0.5 microgram single-stranded mixed library plasmid DNA was mixed with 5 micrograms PCR product representing mixed library inserts and hybridized to an Ecot of 6. Single-stranded (unhybridized) plasmids were isolated by hydroxyapatite chromatography and used to make this library."

75 a 166 c 139 g 89 t 1 others
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libraries representing EI0.5712.5 pancreatic bud, EI6.5
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                                                                                                                       Email: genome-res@gsc.riken.go.jp,

URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.

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Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Imotani, K., Ishii,
Y., Ito, M., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Matsuyama, T.,
Nakamura, M., Nishi, K., Nomura, K., Numasaki, R., Okazaki, Y., Okido, T.,
Saito, R., Sakai, C., Sakai, K., Sakazume, N., Sasaki, D., Sato, K.,
Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagawa,
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Konno,H., Fukunishi,Y., Shibata,K., Itoh,M., Carninci,P., Suc,Y. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                      Laboratory for Genome Exploration Research Group, RIKEN Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-Tel: 81-45-503-9222
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Contact: Yoshihide Hayashizaki
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dev_stage=16 days neonate, sex=mixed), (tissue_type=cerebellum, dev_stage=0 day neonate, sex=mixed), (tissue_type=hippocampus, dev_stage=adult, sex=male), (tissue_type=whole_body, dev_stage=9 days embryo, sex=mixed), (tissue_type=lung, dev_stage=13 days embryo, sex=mixed)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tissues
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="pooled tissues ; (tissue_type=cerebellum,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="inner ear"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:10090"
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                                                                                                                      GI:4471830
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                                   Chordata;
Primates;
   Nierman, W.,
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O; Mismatches
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                              Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
   Malek,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95 t
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                                                                                                                                                                genomic
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de Jong, P. and Venter
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RESULT 5
AQ570344
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Best Local
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                                                              MEDLINE
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                                                                                                                       TITLE
                                                                                                                                                                             AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGATGGCAATGAGTCTTTGCCCTGCCTGTTTTTCTCCATATGTGCCCCTGATGATCAGATC 272
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                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 564)

Mahairas,G.G.; Wallace,J.C., Smith,K., Swartzell,S., Holzman,T.,
                                                                                                                                                                                                                                                                                                                                                     AQ570344 Sequence: 564 bp DNA linear GSS 01-JUN HS_5352_B1_G09_T7A RPCI-11 Human Male BAC Library Homo sapiens genomic clone Plate=928 Col=17 Row=N, DNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Other GSSs: RPCI-11-177D20.TV
Contact: Shaying Zhao, William Nierman,
Department of Eukaryotic Genomics
The Institute for Genomic Research
Contact: Mahairas GG, Wallace JC, High Throughput Sequencing Center University of Washington
                                                                              scanning the human Proc. Natl. Acad. 8
                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                  AQ570344.1
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Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (pieter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/ordering) or from Research Genet cs (info@resgen.com). BAC end search page: http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clones are derived from the human BAC librar library availability, please contact Pieter
                                                              99380589
                                                                                                               Sequence-tagged connectors: A sequence approach to mapping
                                                                                                                                                       Keller,A., Shaker,R., Furlong,J.,
                                                                                                                                                                                                                                                                                                                                       AQ570344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: hbe@tigr.org
                                                                                                                                                                                                                                                                                human.
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/note="Vector: pBACe3.6; Site 1:
RPCI11 Human Male BAC Library"
1 73 c 116 g 126 t
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/db_xref="taxon:9606"
/clone="RPCI-11-177D20"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                  GI:4963564
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                                                                          Sci. U.S.A. 96 (17), 9739-9744 (1999)
                                                                                                genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from the human BAC library RPCI-11. For ty, please contact Pieter de Jong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
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Pred. No. 3.4e
0; Mismatches
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ches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              366
                                                                                                                                                       Young, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 17;
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                                                                                                                                                       Adams, M.D.
                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-1999
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LOCUS
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Best Local :
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                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 741)
NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     library availability, please contact Pieter de Jong (pieter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/ordering_bac.htm or from Resear h Genetics (info@resgen.com). BAC end Web Server: http://www.htsc.washington.edu plate: 928 row: N column: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401 Queen Anne Avenue North, Seattle, WA 98109, USA Tel: (206) 616-3618
Fax: (206) 616-3887
Email: jwallace@u washington.edu
Clones are derived from the human BAC library RPCI-11.
                   found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAM9566 row: k column: 08
                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601445130F1 NIH_MGC_65 Homo
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Location/Qualifiers
                                                                                                                                                                                                       Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                         BE869144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE869144
High quality sequence stop: 696
                                                                             CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                     BE869144.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI; Male blood DNA was isolated from one randomly chosen do and partially digested with a combination of EcoRI and EcoRI Methylase. Size selected DNA was cloned into the pBACe3.6 vector at EcoRI sites"

100 c 138 g 169 t 5 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="male"
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/clone="Plate=928 Col=17 Row=N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
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Pred. No. 1
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L.1e-07;
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                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                          DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9735 row: i column: 09
                                                                                                                                                                                                                                                                   NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
1 (bases 1 to 835)
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EST.
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/clone_lib="NIH MGC_65"
/tlone_type="adenocarcinoma"
/lib_host="DH1OB (phage-resistant)"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.8 kb. Library constructed by Life Technologies. "
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a 259 c 235 g
                 organism="Homo sapiens"
/db_xref="taxon:9606"
                                                              ocation/Qualifiers
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/db_xref="taxon:9606"
lone="IMAGE:3914192"
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hes 150;
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                                                                                                                                                                                                                                                                                                                                        Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 888)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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                                                                                                                         /organism="Homo sapiens"
/db xref="taxon:9606"
/clone="IMAGE:5245034"
/clone=lb="NIH MGC 121"
/lab_host="DH10E"
                 /note="Organ: brain; Vector: pCMV-SPORT6; Site 1: Not1; Site 2: EcoRV (destroyed); RMA source anonymous pool of 3 fetal brains, female age 20 weeks, female age 24 weeks, and male age 26 weeks. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT Average insert size 2.1 kb. "
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Pred. No. 0.0046;
0; Mismatches 129;
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Homo sapiens cDNA clone IMAGE:5245034 5',
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                                                                                                                                                                                                                                                               Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                            Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishi, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system—384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11) 172-71771
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950 bp mRNA linear HTC 19-JAN-2002 Mus musculus 10 day old male pancreas cDNA, RIKEN full-length enriched library, clone:1810021F21:fibroblast growth factor 21,
Genome Res.
20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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0; Mismatches 129;
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                                                                                                                                                                                                                                                                                                                                                                                                             Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokoha Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                      was cleaved with XhoI and SstI. Cloning sites, end: SstI. Host: SOLR.
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Submitted (10-UUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Please visit our web site (http://genome.gsc.riken.go.jp/)
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/organism="Mus musculus"
/strain="CS7BL/GJ"
/db_xref="FANTOM_DB:1810021F21"
/db_xref="MGD:NGI:1901172"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
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/clone="1810021F21" /sex="male" /tissue\_type="pancreas"

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             141;
             DNA Sequencing by: NIH Intramural Sequencing Center Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLCM1235 row: a column: 16
                                                                                                                                                        Tissue Procurement: ATCC
                                                                                                                                                                                                                NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health, I
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                               cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by The I.M.A.G.E. Consortium (
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GPVRFLPMPGLLHEPQDQAGFLPPBPPDVGSSDPLSMVEPLQGR8PSYAS"
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/db_xref="G:12841203"
/db_xref="G:112841203"
/db_xref="MGD:MGI:1861377"
/translation="MEMMRSRYGTLGLWVRLLLAVFLLGVYQAYPIPDSSPLLQFGGQ
/translation="MEMMRSRYGTLGLWVRLLLAVFLLGVYQAYPIPDSSPLLQFGGQ
/VRQRYLYTDDDQDTEAHLBIREDGTVVGAAHRSPESLLELKALKPGVIQILGVKASRF
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/dev_stage="10 day old"
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    - Web: www.genoscope.cns.fr)
Determination of this BAC-end sequence was carried out as part collaboration with the Berkeley Drosophila Genome Project (BDGP)
The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pieter de Jong's laboratory in the Department Cancer Genetics at the Roswell Park Cancer Institute in Buffallo, NY. The library is named RPCI-98 and was constructed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137;
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                                                                                                                                                                                                                            Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - FRANCE (E-mail : segref@genoscope.cns.f)
                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
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Drosophila melanogaster
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/tissue_type="adenocarcinoma cell line"
/tissue_type="adenocarcinoma cell line"
/lab_host="DH10B (phage-resistant)"
/not="Organ: colon; Vector: pOTB7; Site 1: XhoI; Site 2:
EcoRI; cDNA made by oligo-dT priming. Directionally
cloned into EcoRI/XhoI sites using the following 5;
-dantor: GGCACGAG(G). Size-selected >500bp for average
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/clone_lib="NIH_MGC_15"
/clssue_type="adenocarcinoma_cell
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The Roswell Park Cancer Institute in Buffalo named RPCI-98 and was constructed by partial
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Web: www.genoscope.cns.fr)

Determination of this BAC-end sequence was carried out as part collaboration with the European Drosophila Genome Project (EDGP http://www.edgp.ebi.ac.uk -. This Drosophila melanogaster BAC library (Dros BAC) was made by Alain Billaud at CEPH (Centre
                                                                                                                                                                                                                                                                                                               AL106482
AL106482.1
                                                                                              Submitted (23-JUL-1999) Genoscope - Centre BP 191 91006 EVRY cedex - FRANCE (E-mail:
                                                                                                                                                                                           Drosophila melanogaster
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                               Drosophila melanogaster genome sur
BACN15A08 of DrosBAC library from
fly), genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic strain y2; on bw sp, the same strain used for the BDGP's P1 and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be found at http://bacpac.med.buffalo.edu/drosophila_bac.htm.
                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                          Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                CNS016A0
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/db_xref="taxon:7227"
/clone="BACR19016"
/clone_lib="RPCI-98"
/note="end : TET3"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81;
                                                                                                                                                                                                                                                                                                                                                                                              Shoemaker, R., Keim, P., Vodkin, L., Erpelding, J., Coryell, V., Khanna, A., Bolla, B., Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C. Wylie, T., Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                206 bp
sh07b05.yl Gm-c1016 Glycine max
Gm-c1016-4042 5', mRNA sequence
AW395807
                                                                                                                                                             Email: est@watson.wustl.edu
This clone is available through: ResGen, Invitro
South Memorial Parkway Huntsville, AL 35801 For
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       soybean.
Glycine max
                                                                                                                                                call: (800)-533-4363 or contact via
                                                                                                                                                                                                                                                     Washington University School of Medicine
                                                                                                                                                                                                                                                                                             Contact: Shoemaker R/Public Soybean Public Soybean EST Project
                                                                                                                                                                                                                                                                                                                              Public Soybean EST Project
Unpublished (1999)
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and Genevieve Payan.
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                                                                                                                                                                                                                                                                                                                                                                               Y., Person, B., Swaller, T., Gibbons, M., Pape, IR., Ritter, E., Kohn, S., Shin, T., Jackson, Y.,
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/organism="Glycine max"
/db_xref="taxon:3847"
/clone="GENOME SYSTEMS (
/clone_lib="Gm-c1016"
                                                                                          location/Qualifiers
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/clone_lib="DrosBAC"
/plasmid="pBeloBAC11"
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                                                                                                                                                             Invitrogen Corp. 2130
801 For further information
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                      Gm-c1016-4042"
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ionoideae; Phaseoleae;
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RESULT 14
CNS006MT/c
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Determination of this BAC-end sequence was carried out as part of a Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley of some propert (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Marcon Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPC-98 and was Constructed by partial material and the partial of the parties of Property in the BDGD property in the BDGD partial from the BDGD property in the BDGD partial from the BDGD property in the BDGD property in the BDGD partial from the BDGD property in the BDGD property in the BDGD partial from the BDGD part
                                                                                                                                                                                                                                                                                                              ECORI digestion of Drosophila DNA provided by the BDGP from the lsogenic strain y2; on bw sp, the same strain used for the BDGP's Pl and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster
Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSS
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AL065765
AL065765.1 GI:4944645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DIVA linear GSS 03-JUN-1999 Drosophila melanogaster genome survey sequence TET3 end of BAC # BACR14K09 of RPCI-98 library from Drosophila melanogaster (fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - FRANCE (E-mail : segref@genoscope.cns.f)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Drosophila melanogaster.
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                                                                                                                                                                                                                                                                                http://bacpac.med.buffalo.edu/drosophila_bac.htm.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthesized from mRNA using a primer consisting of a poly (dT) sequence with a XhoI restriction site. EcoRI adapters were ligated to the blunt-ended cDNA fragments followed by XhoI digestion. The cDNA fragments were directionally cloned into the EcoRI.XhoI restriction site of the
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                                                                                                                                                                                                                                   Location/Qualifiers
/clone="BACR14K09"
/clone_lib="RPCI-9
                                                                                         organism="Drosophila melanogaster"
/db_xref="taxon:7227"
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/lab_host="XL10-Gold"
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                                   701 SBCCCKGTCKSCCCCCCTCTCMCCCCCYCCMKCRCKYYMTGKKTHMKMYMBMKKMMKMCK 642
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                                                                     GTCATGGGGTTTCACCGCCTTCCTCACTCCATATAGAACACCTTTCCCCAATAGGAAACCC 1138
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACYYTWWTTAAWTTTWTMTTCTCCTCYATCTAAAAAAAAATTCAATATTTTTMTTAMWA
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Web: www.genoscope.cns.fr)
Determination of this BAC-end sequence was carried out as part Determination with the European Drosophila Genome Project (EDC http://www.edgp.ebi.ac.uk - This Drosophila melanogaster BAC http://www.edgp.ebi.ac.uk - This Drosophila melanogaster BAC http://www.edgp.ebi.ac.uk - This Drosophila melanogaster BAC hibrary (Dros BAC) was made by Alain Billaud at CEPH (Centre
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Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                    d'Etude du Polymorphisme Humain) with funding provided by a MRC project grant. The DNA was prepared from embryos by Alain Bucheton and Genevieve Payan. It has been constructed in the vector
                                                                                                                                                                                                                                                                                                                                                                                                                         d'Etude
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (23-JUL-1999) Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - FRANCE (E-mail : segref@genoscope.cns.f)
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i Li	798	49.5	996	9	US-09-991-181-510	510,
14	798	49.5	996	9	US-09-993-687-510	510,
15	798	49.5	996	9	US-09-989-734-510	510.
16	798	49.5	996	9	US-10-028-072-265	265,
17	798	49.5	996	9	US-09-997-653-510	510,
18	798	49.5	996	9	US-09-993-667-510	510.
19	798	49.5	996	9	US-10-121-049-265	Sequence 265, App
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## ALIGNMENTS

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181 CCTTGTGCAGCGTCTGCAGCATGAGCGTCCTCAGAGCCTATCCCAATGCCTCCCCACTGC 240	121 GCACCAGCCACTCAGAGCAGGGCACGATGTTGGGGGCCCGCCTCAGGCTCTGGGTCTGTG 180	61 AAAAGGCCAGTAAGGCCTGGGCCAGGAGAGTCCCGACAGGAGTGTCAGGTTTCAATCTCA 120	1 CGGCAAAAAGGAGGAATCCAGTCTAGGATCCTCACACCAGCTACTTGCAAGGGAGAAAG 60	Query Match 100.0%; Score 1612; DB 9; Length 1612; Best Local Similarity 100.0%; Pred. No. 0; Best Local Similarity 100.0%; Pred. No. 0; Indels 0; Gaps	US-09-901-938-1 US-09-901-938-1 ; Sequence 1, Application US/09901938 ; Patent No. US20020156001A1 ; GENERAL INFORMATION: GENERAL INFORMATION: APPLICANT: WHITE, Kenneth APPLICANT: WHITE, Kenneth APPLICANT: STROW, Tim APPLICANT: MITTINGER, Thomas TITLE OF INVENTION: NOVEL FIBROBLAST GROWTH FACTOR (FGF23) AND METHODS FOR FILE REFERENCE: 053884-5001 ; CURRENT APPLICATION NUMBER: US/09/901,938 ; CURRENT FILLING DATE: 2001-07-10 ; PRIOR APPLICATION NUMBER: 60/219,137 ; PRIOR APPLICATION NUMBER: 60/219,137 ; PRIOR FILLING DATE: 2000-07-19 ; NUMBER OF SEQ ID NOS: 34 ; SOFTWARE: PatentIn version 3.0 ; SEQ ID NO 1 ; LENGTH: 1612 ; TYPE: DNA ; ORGANISM: Homo sapiens US-09-901-938-1
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IOCATION: 127..879
INAME/KEV: sig_peptide
LOCATION: 127..198
IOCATION: 127..198
OTHER INFORMATION: Von Heijne matrix
OTHER INFORMATION: score 5.38660866264012
OTHER INFORMATION: seg ALCSVCSMSVLRA/YP
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SOFTWARE: Patent.pm
SEQ ID NO 57
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Patent No. US20020102604A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 1239; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/731,872
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: US 60/169,629
PRIOR FILING DATE: 1999-12-08
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR FILING DATE: 2000-03-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Dumas Milne Edwards, Jean Baptist APPLICANT: Bougueleret, Lydie APPLICANT: Jobert, Severin TITLE OF INVENTION: FULL-LENGTH HUMAN cDNAs FILE REFERENCE: 78.US3.REG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Homo
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NAME/KEY: CDS
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                                                        GGCACGATGTTGGGGGCCCGCCTCAGGCTCTGGGTCTGTGCCTTGTGCAGCGTCTGCAGC
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            CCCTTCATGAAGGTAGAGAGAGAGGGGTCTCTCCCAACATATTTCTCTTCCTTGTGCCT
                                                     CCCTTCATGAAGGTAGAGAGAGAGGGGGTCTCTCCCAACATATTTCTCTTCCTTGCGTGCCTCT
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RESULT 3
US-09-924-340-25
; Sequence 25, Application US/09924340
; Publication No. US20030027248A1

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PEATURE:
PEATURE:
NAME/KEY: 5'UTR
LOCATION: 1..126
NAME/KEY: CDS
LOCATION: 127..879
NAME/KEY: 3'UTR
LOCATION: 880..1239
NAME/KEY: 9017A_site
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PRIOR FILLING DATE: 2001-07-13
PRIOR APPLICATION NUMBER: US 60/302,277
PRIOR FILLING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/298,698
PRIOR FILLING DATE: 2001-06-15
PRIOR FILLING DATE: 2001-05-25
PRIOR FILLING DATE: 2001-05-25
NUMBER OF SEQ ID NOS: 112
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SEQ ID NO 25
LENGTH: 1239
TYPE: DNA
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Best Local
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CURRENT FILING DATE: 2001-08-06
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APPLICANT: Tanaka, Hiroaki
TITLE OF INVENTION: HUMAN CDNAS AND PROTEINS AND USES THEREOF
FILE REFERENCE: 91.US2.REG
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Pred. No. 0;
0; Mismatches
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Sequence 25, Application US/0992600A
Publication No. US20030027161A1
GENERAL INFORMATION:
APPLICANT: Benjanin, Stephane
APPLICANT: Tanaka, Hiroaki
TITLE OF INVENTION: HUMAN CDNAS AND PROTEINS AND
FILE REFERENCE: 91.US4.DIV
CURRENT APPLICATION NUMBER: US/09/992,600A
CURRENT FILING DATE: 2001-11-13
PRIOR APPLICATION NUMBER: US 09/924,340
PRIOR FILING DATE: 2001-08-06
PRIOR APPLICATION NUMBER: US 09/924,340
PRIOR APPLICATION NUMBER: US 09/924,340
PRIOR APPLICATION NUMBER: US 60/305,456
PRIOR APPLICATION NUMBER: US 60/305,456
PRIOR APPLICATION NUMBER: US 60/302,277
PRIOR FILING DATE: 2001-06-19
PRIOR APPLICATION NUMBER: US 60/302,277
PRIOR APPLICATION NUMBER: US 60/302,277
PRIOR APPLICATION NUMBER: US 60/302,277
PRIOR FILING DATE: 2001-06-19
PRIOR APPLICATION NUMBER: US 60/298,698
PRIOR APPLICATION NUMBER: US 60/293,574
PRIOR FILING DATE: 2001-05-25
NUMBER: OF SEQ ID NOS: 114
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US-09-992-600A-25
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Best Local (
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NAME/KEY: polyA_site
LOCATION: 1224..1239
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LOCATION: 127..879
FEATURE:
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LOCATION: 1..126
FEATURE:
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LOCATION: 880..1239
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FEATURE:
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LENGTH: 1239
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Pred. No. 0;
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PRIOR FILING DATE: 2001-08-06
PRIOR APPLICATION NUMBER: US 60/305,456
PRIOR FILING DATE: 2001-07-13
PRIOR REPLICATION NUMBER: US 60/302,277
PRIOR ETLING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/298,698
PRIOR APPLICATION NUMBER: US 60/293,574
PRIOR FILING DATE: 2001-05-25
PRIOR PILING DATE: 2001-05-25
PRIOR PILING DATE: 2001-05-25
NUMBER OF SEQ ID NOS: 112
                                                                                                                                                                                            SEQ ID NO 25
LENGTH: 1239
TYPE: DNA
ORGANISM: Homo sapiens
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FEATURE:
NAME/KEY: 5'UTR
LOCATION: 1.126
NAME/KEY: CDS
LOCATION: 127.879
NAME/KEY: 3'UTR
LOCATION: 880.1239
NAME/KEY: polyA site
LOCATION: 1224.1239
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CURRENT FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: US 09/924,340
PRIOR FILING DATE: 2001-08-06
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APPLICANT: Tanaka, Hiroaki
TITLE OF INVENTION: HUMAN CDNAS AND PROTEINS AND USES THEREOF
FILE REFERENCE: 91.US6.DIV
                                                                                                                                                                                                                                                                                       SOFTWARE: JPatent
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CURRENT APPLICATION NUMBER: US/09/754,634A
CURRENT FILING DATE: 2001-05-11
PRIOR APPLICATION NUMBER: US 60/174,582
PRIOR FILING DATE: 2000-01-05
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 1211
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (115)...(870)
US-09-754-634A-1
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US-09-754-634A-1
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Best Local Similarity
Matches 1211; Conserv
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TITLE OF INVENTION: FGF HOMOLOG ZFGF12
FILE REFERENCE: 00-02
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100.0%; Pr
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                    Sequence 510, Application US/09992598
Patent No. US20020160384A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi J.
APPLICANT: Baker, Kevin P.
APPLICANT: Betstein, David
APPLICANT: Betstein, David
APPLICANT: Eston, Dan L.
APPLICANT: Ferrara, Napoleone
APPLICANT: Ferrara, Napoleone
APPLICANT: Gerber, Hanspeter
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US-09-992-598-510
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Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Goddwski, Paul J.
Grimaldi, J. Christopher
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PRIOR PILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
PRIOR FILING DATE: 1997-11-12
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TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
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PRIOR FILING DATE: 1997-06-16
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CURRENT FILING DATE: 2001-11-14
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APPLICATION NUMBER: 60/088655
FILING DATE: 1998-06-09
APPLICATION NUMBER: 60/088734
FILING DATE: 1998-06-10
                                                                 FILING DATE: 1998-06-05
                                                                              APPLICATION NUMBER: 60/088217
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FILING DATE: 1998-06-05
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FILING DATE: 1998-06-04
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APPLICATION NUMBER: 60/088030
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APPLICATION NUMBER: 60/088026
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APPLICATION NUMBER: 60/088025
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APPLICATION NUMBER: 60/087827
FILING DATE: 1998-06-03
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APPLICATION NUMBER: 60/087759
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APPLICATION NUMBER: 60/087609
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APPLICATION NUMBER: 60/066770
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Williams, P. Mickey
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Kljavin,Ivar J.
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art, Timothy A.
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OR FILING DATE: 1998-06-17
OR APPLICATION NUMBER: 60/089599
OR FILING DATE: 1998-06-17
OR APPLICATION NUMBER: 60/089600
OR FILING DATE: 1998-06-17
OR APPLICATION NUMBER: 60/089653

APPLICATION NUMBER: 60/089598

FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0

FILING DATE: 1998-06 APPLICATION NUMBER:

1998-06-17 1998-06-18

60/089801

FILING DATE: 1998-06-18 APPLICATION NUMBER: 60/089947

APPLICATION NUMBER: 60/089908

1998-06-18

60/089907

FILING DATE: 1998-00 APPLICATION NUMBER:

60/089952

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1998-06-24

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APPLICATION NUMBER: 60/090444

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APPLICATION NUMBER: 60/090676
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APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Watanabe, Colin K.
APPLICANT: Williams, p. Mickey
APPLICANT: Williams, p. Mickey
APPLICANT: Wood, William I.
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Politics Pressness and Politics Reference: PILE REFERENCE: P2730P1C66
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PRIOR FILING DATE: 1997-06-16
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Stewart, Timothy A.
Tumas, Daniel
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Grimaldi, J. Christopher
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Gerritsen, Mary E
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Eaton, Dan L.
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NUMBER: 60/075945
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DATE: 1998-05-28

R APPLICATION NUMBER: 60/087607

DR FILING DATE: 1998-06-02

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DR PILING DATE: 1998-06-02

DR APPLICATION NUMBER: 60/087759

DR APPLICATION NUMBER: 60/087827

APPLICATION NUMBER: 60/088025 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088026

FILING DATE: 1998-06-03
APPLICATION NUMBER: 60/088021
FILING DATE: 1998-06-04

R FILING DATE: 1998-02-25

R APPLICATION NUMBER: 60/078910

R FILING DATE: 1998-03-20

R APPLICATION NUMBER: 60/083322

R FILING DATE: 1998-04-28

R APPLICATION NUMBER: 60/084600

R FILING DATE: 1998-05-07

APPLICATION NUMBER: 60/087106

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DR FILING DATE: 1998-06-12
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Publication No.
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PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
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CURRENT FILING DATE: 2001-11-19
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DR FILING DATE: 1998-03-20
DR APPLICATION NUMBER: 60/083322
DR FILING DATE: 1998-04-28
DR APPLICATION NUMBER: 60/084600
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Kljavin, Ivar J.
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Grimaldi, J.Christopher
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APPLICATION NUMBER: 60/091633
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114 AATCTCAGCACCAGCCACTCAGAGCAGGGCACGATGTTGGGGGCCCCGCCTCAGGCTCTGG 173 319 199 AATOTOAGCACCAGCCACTOAGAGCAGGGCACGATGTTGGGGGCCCGCCTCAGGCTCTGG 258 CCACTGCTCGGCTCCAGCTGGGGTGGCCTGATCCACCCTGTACACAGCCACAGCCAGGAAC 293 GTCTGTGCCTTGTGCAGCGTCTGCAGCATGAGCGTCCTCAGAGCCCTATCCCAATGCCTCC 233 CCACTGCTCGGCTCCAGCTGGGGTGGCCTGATCCACCTGTACACAGCCACAGCCAGGAAC GTCTGTGCCTTGTGCAGCGTCTGCAGCGTGCGTCCTCAGAGCCTATCCCAATGCCTCC Indels 0; Gaps 378 318 0,

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: Baker, Kevin P.
: Botstein, David
                                                                                                                                                     Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Watanabe, Colir
Williams, P. M:
Wood, William
                                         Stewart, Timo
Tumas, Daniel
                                                                                                                             Gurney, Austin L.
Kljavin, Ivar J.
                                                                                                                                                                                                                                                         Eaton, Dan L.
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                                                                                     Paoni,Nicholas F.
                                                                                                             Napier, Mary A.
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                                                                                                    ,James
                                                      Margaret Ann
art, Timothy A.
              Colin K.
P. Mickey
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OR APPLICATION NUMBER: 60/088212
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OR FILING DATE: 1998-06-04
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OR FILING DATE: 1998-05-28
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OR APPLICATION NUMBER: 60/66770
OR FILING DATE: 1997-11-24
OR APPLICATION NUMBER: 60/075945
OR FILING DATE: 1998-02-25
OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/083322
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60/090355

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APPLICATION NUMBER: 60/090246

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APPLICATION NUMBER: 60/089947 FILING DATE: 1998-06-19 APPLICATION NUMBER: 60/089948

FILING DATE: 1998-06-18 APPLICATION NUMBER:

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60/090431

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APPLICATION NUMBER: 60/090429
FILING DATE: 1998-06-24

APPLICATION NUMBER: 60/090355

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RESULT 12
US-09-990-436-510
; Sequence 510, Application US/0;
; Publication No. US20020198148;
; Publication No. US20020198148;
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Butstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan L.
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PRIOR PRIOR

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DR FILING DATE: 1998-06-24

DR APPLICATION NUMBER: 60/990540

DR FILING DATE: 1998-06-24

DR PILING DATE: 1998-06-24

FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090535 FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090472

APPLICATION NUMBER: 60/090445 APPLICATION NUMBER: 60/090444 FILING DATE: 1998-06-24

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CURRENT FILING DATE: 2001.11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
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TITLE OF INVENTION: Secreted and Transmembritle OF INVENTION: Acids Encoding the Strike REFERENCE: P2730P1C14

CURRENT APPLICATION NUMBER: US/09/990,436

CURRENT FILING DATE: 2001-11-14
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R APPLICATION NUMBER: 60/088326
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APPLICATION NUMBER: 60/087609
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087759
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APPLICATION NUMBER: 60/087106
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APPLICATION NUMBER: 60/087827
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APPLICATION 1
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APPLICATION NUMBER: 60/078910
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Williams, P. Mickey
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Gerber,Hanspeter
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art, Timothy A.
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FILING DATE: 1998-06-16
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PR APPLICATION NUMBER: 60/090676

DR FILING DATE: 1998-06-25

DR APPLICATION NUMBER: 60/090678

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DR APPLICATION NUMBER: 60/090690

DR FILING DATE: 1998-06-25

DR APPLICATION NUMBER: 60/090694

DR FILING DATE: 1998-06-25

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APPLICATION NUMBER: 60/091982
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FILING DATE: 1998-07-09
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APPLICATION NUMBER: 60/091978
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APPLICATION NUMBER:
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FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090557
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APPLICATION NUMBER: 60/090472
FILING DATE: 1998-06-24
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APPLICATION NUMBER: 60/090540
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                        AGCAGAAGATACCTCTGCATGGATTTCAGAGGCAACATTTTTGGATCACACTATTTCGAC
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  AGCAGAAGATACCTCTGCATGGATTTCAGAGGCAACATTTTTGGATCACACTATTTCGAC
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APPLICANT: Watanabe, Colin K.
APPLICANT: Williams, P. Mickey
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Pol
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C53
CURRENT APPLICATION NUMBER: US/09/991,181
CURRENT FILING DATE: 2001-11-16
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR APPLICATION NUMBER: 60/065186
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                                                                                                                                                                                                                                  APPLICANT:
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Stewart, i...
Stewart, i...
Stewart, i...
Stewart, i...
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Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                         Gurney, Austin I
Kljavin, Ivar J.
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Grimaldi, J. Christopher
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Botstein, David
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DR FILING DATE: 1997-11-12

JR APPLICATION NUMBER: 60/065311

DR FILING DATE: 1997-11-13

JR APPLICATION NUMBER: 60/066770

DR FILING DATE: 1997-11-24

JR APPLICATION NUMBER: 60/075945

JR FILING DATE: 1998-02-25

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OR APPLICATION NUMBER: 60/078910
OR PILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/08322
OR APPLICATION NUMBER: 60/08360
OR PILING DATE: 1998-05-07
OR APPLICATION NUMBER: 60/08760
OR PILING DATE: 1998-06-02
OR APPLICATION NUMBER: 60/08760
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OR APPLICATION NUMBER: 60/088025
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OR APPLICATION NUMBER: 60/088876
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/089105
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DR FILING DATE: 1998-07-02
DR APPLICATION NUMBER: 60/091633
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DR APPLICATION NUMBER: 60/091978
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DR APPLICATION NUMBER: 60/091982
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DR APPLICATION NUMBER: 60/092182
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FILING DATE: 1998-07-02
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                           GGTCGAGTGAACACGCACGCTGGGGGGAACGGCCCGGAAGGCTGCCGCCCCTTCGCCAAG
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APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Pol
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C11
CCURRENT APPLICATION NUMBER: US/09/993,687
CCURRENT FILING DATE: 2002-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR APPLICATION NUMBER: 60/049787
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
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APPLICANT: Baker, Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan L.
APPLICANT: Ferrara, Napoleon
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DR FILLING DATE: 1998-06-02
DR APPLICATION NUMBER: 60/087827
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DR APPLICATION NUMBER: 60/088021
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FILING DATE: 1998-06-02
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APPLICATION NUMBER: 60/087106
FILING DATE: 1998-05-28
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Kljavin, Ivar J.
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Grimaldi, J. Christopher
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Goddard, Audrey
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art, Timothy A.
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FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088858

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FILING DATE: 1998-06-11
APPLICATION NUMBER: 60/088861
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Baker, Kevin P.
Botstein, David
                                           Godowski,Paul J.
Grimaldi,J.Christopher
Gurney,Austin L.
Kljavin,Ivar J.
                                                                                                           Gerritsen, Mary E. Goddard, Audrey
                                                                                                                                          Fong, Sherman
Gerber, Hanspeter
                                                                                                                                                                                           Eaton, Dan L.
Paoni, Nicholas F
                            Napier, Mary A.
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DR FILING DATE: 1998-05-28

DR APPLICATION NUMBER: 60/08

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Williams, P. Mi
Wood, William
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Stewart, Timothy
               DATE: 1998-06-10
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DR FILING DATE: 1998-06-10

PR APPLICATION NUMBER: 60/088824

PR APPLICATION NUMBER: 60/088826

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OR APPLICATION NUMBER: 60/089599

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OR APPLICATION NUMBER: 60/089653

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APPLICATION NUMBER: 60/089532

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OR APPLICATION NUMBER: 60/091978
OR APPLICATION NUMBER: 60/091978
OR APPLICATION NUMBER: 60/091982
OR APPLICATION NUMBER: 60/092182
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OR FILING DATE: 1998-07-09
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DR FILING DATE: 1998-07-01

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DR FILING DATE: 1998-07-02

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DR FILING DATE: 1998-06-18
R APPLICATION NUMBER: 60/089908
DR FILING DATE: 1998-06-18
PR APPLICATION NUMBER: 60/089947
DR FILING DATE: 1998-06-19
DR APPLICATION NUMBER: 60/089948
DR FILING DATE: 1998-06-19

FILING DATE: 1998-06-18 APPLICATION NUMBER: 60/089907

PRIOR PRIOR

APPLICATION NUMBER: 60/090445
FILING DATE: 1998-06-24
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APPLICATION NUMBER: 60/090349

APPLICATION NUMBER: 60/090246 FILING DATE: 1998-06-22 APPLICATION NUMBER: 60/089952 FILING DATE: 1998-06-19

FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/090355
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## US-08-187-780-2

Sequence 2, Application US/08187780 Patent No. 5459250

GENERAL INFORMATION:
APPLICANT: CLAUDI APPLICANT: CLAUDIO BASILICO APPLICANT: DANIELA TALARICO TITLE OF INVENTION: MAMMALIJ CORRESPONDENCE ADDRESS: NUMBER OF SEQUENCES: ADDRESSEE: 805 Third Avenue Darby & Darby P.C. MAMMALIAN GROWTH FACTOR

ZIP: 10022 COMPUTER READABLE FORM: MEDIUM TYPE: Diskette, 5.25 inch, MEDIUM TYPE: 360 Kb storage COMPUTER: IBM or IBM-compatible OPERATING SYSTEM: PC/MS-DOS COUNTRY: New York USA

APPLICATION NUMBER: US/08/187,78
FILING DATE: January 25, 1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/901,705
FILING DATE: June 22, 1992
APPLICATION NUMBER: 07/806,771
FILING DATE: December 6, 1991
APPLICATION NUMBER: 07/177,506
FILING DATE: APPLICATION NUMBER: 07/062,925
FILING DATE: June 16, 1987
APPLICATION NUMBER: 07/062,925
FILING DATE: JUNE 16, 1987
ATTORNEY/AGENT INFORMATION:
NAME: HOWARD NUMBER: 32,613 SOFTWARE: Wordperfect CURRENT APPLICATION DATA: US/08/187,780

TELEPHONE: (212) 527-770
TELEFAX: (212) 753-6237
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS: REFERENCE/DOCKET NUMBER: 5986/13586-US3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 527-7700

TOPOLOGY: I STRANDEDNESS: TYPE: nucleic acid linear

DESCRIPTION: Genomic DNA

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Best Local Similarity
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           SOPTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/187,780
                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 incl
MEDIUM TYPE: 360 Kb storage
COMPUTER: IBM or IBM-compatible
OPERATING SYSTEM: PC/MS-DOS
GOFFRADE: M-12-16-16-1
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IDENTIFICATION METHOD:
OTHER INFORMATION: Thi
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                                                                                                                                                                                      ADDRESSEE: Darby & Darby P.C. STREET: 805 Third Avenue CITY: New York
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FILING DATE:
PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
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 FILING DATE:
                                                                                                                                                        COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTGGAAAACGGGTACGACGTCTACC 528
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DANIELA TALARICO
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January 25, 1994
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52.4%;
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                                                                                                         5.25 inch
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Pred. No. 0.00016;
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RELEVANT RESIDUES
US-08-187-780-5
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: April 4, 1988
APPLICATION NUMBER: 07/062,925
FILING DATE: June 16, 1987
ATTORNEY/AGENT INFORMATION:
NAME: Howard M. Frankfort
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DESCRIPTION:
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                                                                                                                                                                                                                                                          289 GGAACAGCTACCACCTGCAGATCCACAAGAATGGCCATGTGGATGGCGCACCCCATCAGA 348
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STRANDEDNESS: single
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APPLICATION NUMBER: 07/177,506
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REFERENCE/DOCKET NUMBER: 59
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                         ACTOTOCTCAGTATCACTTCCTGGTCA 555
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                                                                               TCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTGGAAAAACGGGTACGACGTCTACC 528
                                                                                                              TGGCCAGCCGGTTCTTCGTGGCCATGAGCAAGCAAGCTCTATGGCTCGCCCCTTCT
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June 27, 1994
June 27, 1991
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Pred: No. 0.00016;
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US-08-478-485-2
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APPLICANT: CLAUDIO BASILICO
APPLICANT: DANIELA TALARICO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 07/17
FILING DATE: April 4, 198
APPLICATION NUMBER: 07/06:
FILING DATE: June 16, 198
ATTORNEY/AGENT INFORMATION:
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NFORMATION FOR SEQ ID NO:
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LENGTH: 423.
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MEDIUM TYPE: Floppy Diskette,
MEDIUM TYPE: 1.44 MB storage
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DESCRIPTION:
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OTHER INFORMATION: Th
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APPLICATION NUMBER: 07/901,705
APPLICATION NUMBER: 07/902,705
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               PUBLICATION DATE:
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                                    FILING DATE:
                                                 DOCUMENT NUMBER:
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FILING DATE: Januar
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STATE: New York
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NUMBER: 07/806,771
December 6, 1991
NUMBER: 07/177,506
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IN SEQ ID NO:
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                                               APPLICATION NUMBER: 07/901/705
FILING DATE: June 22, 1992
APPLICATION NUMBER: 07/806,771
FILING DATE: December 6, 1991
APPLICATION NUMBER: 07/17,506
FILING DATE: December 6, 1991
APPLICATION NUMBER: 07/17,506
FILING DATE: April 4, 1988
APPLICATION NUMBER: 07/062,925
FILING DATE: June 16, 1987
ATTORNEY/ACENT INFORMATION:
NAME: JOSEPH R. Robinson
REGISTRATION NUMBER: 33,448
REFERENCE/DOCKET NUMBER: 5986/13:
TELECOMMUNICATION INFORMATION:
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Best Local Similarity 52.4%;
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APPLICATION NUMBER:
FILING DATE: January
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MEDIUM TYPE: Floppy Diskette,
MEDIUM TYPE: 1.44 MB storage
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CURRENT APPLICATION DATA:
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                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/478,485 FILING DATE: Concurrently Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC
OPERATING SYSTEM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: New York
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(212) 753-6237
DR SEQ ID NO:
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DANIELA TALARICO
MANWALIAN GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IBM PC compatible SYSTEM: PC/MS-DOS
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                                       (212)
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                                                                                                                                                                                                                                                                                                                  January
                                       527-7700
                                                                                                                                                                                                                                                                                                                                           08/187,780
                                                                              5986/13586-US6
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Pred. No. 0.00016;
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PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO: 1-423
US-08-478-485-5
                                                                                                                                                                                                                                                                                                                      US-08-478-486F-2
                                                                                                                                                                                                                                                                                                                                             RESULT 5
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Best Local Similarity 52.4%;
Matches 140; Conservative
                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                  quence 2, Application US/08478486F
tent No. 6432702
                                                                                                                                                             APPLICANT: CLAUDIO BASILICO
APPLICANT: DANIELA TALARICO
TITLE OF INVENTION: MAMMALIAN GROWTH
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Diskette, 3+ inch,
MEDIUM TYPE: 1.44 MB storage
                                                                                                                                                                                                                                                                                                                                                                                                     311
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DESCRIPTION:
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                                                                                                                                  STREET:
                                                                            COUNTRY:
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OTHER INFORMATION:
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STRANDEDNESS: single
TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                       ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTCTCCTCAGTATCACTTCCTGGTCA 555
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                                                                                                               New York
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                                                                                                                                  E: Darby & Darby P.C.
805 Third Avenue
                                                                            USA
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Corresponds to K-FGF-140 and can be
corresponds to Inches 39-47 and page
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Pred. No. 0.00016;
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Best Local Similarity
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TELEFAX: (212) 753-6237
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 32,613
REFERENCE/DOCKET NUMBER: 5986/13586-US7
TELECOMMUNICATION INFORMATION:
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APPLICATION NUMBER: 07/0
FILING DATE: June 16, 19
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DESCRIPTION: HYPOTHETICAL:
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC/MS-DOS SOFTWARE: Wordperfect 5.1 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                       469
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OTHER INFORMATION: Th
OTHER INFORMATION: fo
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LOCATION:
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APPLICATION NUMBER: 07/177,50
FILING DATE: April 4, 1988
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AGTCCTACAAGTACCCCGGCATGTTCA 337
                                                                   ACTCTCCTCAGTATCACTTCCTGGTCA
                                                                                                                                       TCACC---GATGAGTGCACGTTCAAGGAGATTCTCCTTCCCAACAACTACAACGCCTACG
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June 22, 1952
June 77,806,771
June 7, 1991
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IMBER: 07/901,705
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Pred. No. 0.00016;
0; Mismatches 124
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US-08-478-486F-5; Sequence 5, Application US/08478486F; Patent No. 6432702

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APPLICATION NUMBER: 07/806,771
FILING DATE: December 6, 1991
APPLICATION NUMBER: 07/177,506
FILING DATE: April 4, 1988
APPLICATION NUMBER: 07/062,925
FILING DATE: June 16, 1987
ATTORNEY/AGENT INFORMATION:
NAME: HOWARD INFORMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (212) 753-6237 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATE: January 07/901,...
APPLICATION NUMBER: 07/901,...
APPLICATION NUMBER: 07/906,771
TWG DATE: June 22, 1992
07/806,771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (212) 527-7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 536
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: PC/MS-DOS
SOFTWARE: Wordperfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Diskette,
MEDIUM TYPE: 1.44 MB storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                 409
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FITLE OF INVENTION: MAMMALIAN GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: CLAUDIO BASILICO
APPLICANT: DANIELA TALARICO
                                                                                                                                                                                              349
                                                                                                                                                                                                                                                                                                                                        289 GGAACAGCTACCACCTGCAGATCCACAAGAATGGCCATGTGGATGGCGCACCCCATCAGA 348
                                                                                                                                                                                                                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
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REFERENCE/DOCKET NUMBER: 5986/13586-US7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/478,486F FILING DATE: June 7, 1995 CLASSIFICATION: 536
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION:
IDENTIFICATION METHOD:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
TGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGCAACATTTTTGGATCACACTATT 468
                                                                                                              CCCGCGACAGCCTGCTGGAGCTCTCGCCCGTGGAGCGGGGCGTGGTGAGCATCTTCGGCG 193
                                                                                                                                                                                   CCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCTGGCTTTGTGGTGATTACAGGTG 408
                                                                                                                                                                                                                                                               GCATCGGCTTCCACCTCCAGGCGCTCCCCGACGGCCGCATCGGCGGCGCGCACGCGGACA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10022
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                                                                                                                                                                                                                                                                                                                                                                                                                                               3.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence corresponds to K-FGF-140 and can be found on page 11, lines 39-47 and page 12, lines 1-31, in the application, as
                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 52.6; DB 4;
Pred. No. 0.00016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 423;
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                                       Matches 140;
                                                    Query Match
Best Local Similarity
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                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                              TOPOLOGY: 1i
                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Howard M. Frankfort
REGISTRATION NUMBER: 32,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/187,780
FILING DATE: January 25, 1994
                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 527-7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
     289
                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 07/
FILING DATE: December 6
APPLICATION NUMBER: 07/
FILING DATE: April 4, 1
APPLICATION NUMBER: 07/
FILING DATE: June 16, 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: CLAUDIO BASILICO
APPLICANT: DANIELA TALARICO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: MAMMALIAN NUMBER OF SEQUENCES: 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatibl
OPERATING SYSTEM: PC/MS-DO
                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08, FILING DATE: June 7, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy Diskette,
MEDIUM TYPE: 1.44 MB storage
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: January 25, 1994
APPLICATION NUMBER: 07/901,705
FILING DATE: June 22, 1992
                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
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GGAACAGCTACCACCTGCAGATCCACAAGAATGGCCATGTGGATGGCGCACCCCCATCAGA 348
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                                                                                                                                                                                  nucleic acid
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                                                                                                                                                                                                     528 base pairs
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                                         Conservative
                                                                                                                                                                                                                                                            (212)
                                                                                                                                              ss: single
linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 December 6, 1991
                                                      3.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PC/MS-DOS
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                                                                                                                                                                                                                                                                                                                                 32,613
                                                                                                                                                                                                                                                                                                                  5986/13586-US7
                                                      Score 52.6; DB 4;
Pred. No. 0.00018;
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                                       Mismatches
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                                                                       DB 4;
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5430019-1
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APPLICANT: ROGERS, DAVID T.; WOLFMAN, NEIL M.; SEEHRA, JASBIR S. TITLE OF INVENTION: HOMOGENEOUS K-FGF AND USE OF THE SAME NUMBER OF SEQUENCES: 2
                                                                                                                                                                                                                                                                                                                                                            Sequence 9, Application US/08478486F Patent No. 6432702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
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APPLICATION NUMBER: US/07/8:
FILING DATE: 12-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 438,278
FILING DATE: 16-NOV-1989
                                                                                                                                                      ADDRESSEE: Darby & D
                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       422
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302 TGGCCAGCCGGTTCTTCGTGGCCATGAGCAGCAAGGGCAAGCTCTATGGCTCGCCCTTCT 361
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                                                                                                                                                                                                                                              TLE OF INVENTION:
                                                                      CITY: New York
STATE: New Yor
                                               COUNTRY:
                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 599
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGCAACATTTTTGGATCACACTATT 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCTGGCTTTGTGGTGATTACAGGTG 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCATCGGCTTCCACCTCCAGGCGCTCCCCGACGGCCGCATCGGCGGCGCGCACGCGGACA 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAACAGCTACCACCTGCAGATCCACAAGAATGGCCATGTGGATGGCGCACCCCATCAGA 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTCCTACAAGTACCCCGGCATGTTCA 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTOTOCTOAGTATOACTTCCTGGTCA 555
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                                                                         New York
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                                                                                                                                                                                                                                                                         CLAUDIO BASILICO
DANIELA TALARICO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.3%; Score 52.6; DB 6; 52.4%; Pred. No. 0.00019;
                                                                                                                                                      & Darby P.C
                                                                                                                                                                                                                                      MAMMALIAN GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/07/898,051
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                                                                                                                                                                                                                                                                                  RESULT 10
US-08-478-486F-11
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                                                                                                                                                                                                                                Sequence 11, Application US/08478486F Patent No. 6432702
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Best Local Similarity
                                                                                                          GENERAL INFORMATION:
APPLICANT: CLAUDIO BASILICO
APPLICANT: DANIELA TALARICO
TITLE OF INVENTION: MAMMALIAN GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Diskette, 3
MEDIUM TYPE: 1.44 MB storage
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC/MS-DOS
SOFTWARE: Wordporfect 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                       NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Darby & Darby P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 5986/13586-US7
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 527-7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: June 16, 198
ATTORNEY/AGENT INFORMATION:
NAME: Howard M. Frankfort
REGISTRATION NUMBER: 32,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     332
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APPLICATION NUMBER:
FILING DATE: January
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STRANDEDNESS: sing
TOPOLOGY: linear
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FILING DATE: April 4,
APPLICATION NUMBER: 0
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805 Third Avenue
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(212) 75
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UMBER: 07/806,771
December 6, 1991
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CY 25, 1994
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Pred. No. 0.00019;
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Mismatches 124;

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391 408 331 DB 4;

Length 618; Indels

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RESULT 11
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                                                          Sequence 11, Application PC/TUS9306251
GENERAL INFORMATION:
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 32,613
REFERENCE/DOCKET NUMBER: 5986/13586-US7
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 527-7700
TELEFAX: (212) 753-6237
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 07/806,771
FILING DATE: December 6, 1991
APPLICATION NUMBER: 07/177,506
FILING DATE: April 4, 1988
APPLICATION NUMBER: 07/62,925
FILING DATE: June 16, 1987
ATTORNEY/AGENT INFORMATION:
NAME: Howard M. Frankfort
REGISTRATION NUMBER: 32,613
REGISTRATION NUMBER: 32,613
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MEDIUM TYPE: Floppy Diskette,
MEDIUM TYPE: 1.44 MB storage
APPLICANT: Wickstrom, Eric and Rife, Jason P.
TITLE OF INVENTION: Trivalent Synthesis of Oligonucleotides Containing
TITLE OF INVENTION: Stereospecific Alkylphosphonates and Arylphosphona
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PRIOR APPLICATION DATA:
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                                                                                                                                                                                 751 AGTCCTACAAGTACCCCGGCATGTTCA 777
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APPLICATION NUMBER: 07/901,705
APPLICATION NUMBER: 07/901,705
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STATE: New York
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                                                                                                                                                                                                                    ACTCTCCTCAGTATCACTTCCTGGTCA 555
                                                                                                                                                                                                                                                                                              TCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTGGAAAAACGGGTACGACGTCTACC 528
                                                                                                                                                                                                                                                                                                                                                                           TGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGCAACATTTTTGGATCACACTATT 468
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June 7, 1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.3%;
  Stereospecific Alkylphosphonates and Arylphosphonates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches 124; Indels
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Pred. No. 0.00027;
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RESULT 12
US-07-915-934-1
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; MOLECULE TYPE: DNA (genomic)
PCT-US93-06251-11
                                                                                                                                                                                                  Sequence 1, Application US/07915934
Patent No. 5360893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 3.3%;
Best Local Similarity 52.4%;
Matches 140; Conservative
                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 516-742-436
TELEFAX: 516-742-4366
TELEX: 230 901 SANS UI
INFORMATION FOR SEQ ID NO:
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: FREDERICK W. PEPPER, PH.D.
STREET: 11545 W. BERNARDO COURT, STE. 302
                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 85
TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-4343
                                                                                 TITLE OF INVENTION: DNA SEQUENCES ENCODING PROTEINS USED TO TITLE OF INVENTION: ELICIT AND DETECT PROGRAMMED CELL DEATH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              651 CCCGCGACAGCCTGCAGCTCTCGCCCCGTGGAGCGGGGCGTGGTGAGCATCTTCGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Polarian
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 11530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: DiGiglio, Frank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                              ACTOTOCTCAGTATCACTTCCTGGTCA 555
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCTGGCTTTGTGGTGATTACAGGTG 408
                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTGGAAAAACGGGTACGACGTCTACC
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                                                                                                                                                                                                                                                                                                                                                                                                    TCACC---GATGAGTGCACGTTCAAGGAGATTCTCCCTTCCCAACAACTACAACGCCTACG
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                                                                                                                   COHEN, J. J.
HAHN, WILLIAM E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1219 base pairs
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Pred. No. 0.00028
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US-08-325-743-1
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Best Local Similarity 67.0%;
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Patent No. 5527682
                                                                                                                                                                                                                                                                                                                                                                                                        ENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 972 base pairs
TYPE: NUCLEIC ACID
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1178 GAGAAGGGGTCTCTCCCAACATATTTCTCTTCCTTGTGCCTCTCCTCTTTATCACTTTTA 1237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1238 AGCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA 1274
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PATEN: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/325,743
FILING DATE: 19-OCT-1994
CLASSIFICATION: 435
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: PEPPER PH.D., FREDERICK W.
REGISTRATION NUMBER: 31,286
REFERENCE/DOCKET NUMBER: 92-0224
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 451-1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           923
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                                                                                                                                                                                                                                                         TUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: FREDERICK
                                                                                                                                                                                                                                                                                                                                                                    PPLICANT:
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LOCATION:
                                                                                                                                                                                                    STREET: 11545 W
CITY: SAN DIEGO
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/07/915,934 FILING DATE: 19920720 CLASSIFICATION: 435
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                   USA
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                                                                                                                                                                                                                                  FREDERICK W. PEPPER, PH.D.
545 W. BERNARDO COURT, STE. 302
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                                                                                                                                                                                                                                                                                                            DNA SEQUENCES ENCODING PROTEINS USED TO ELICIT AND DETECT PROGRAMMED CELL DEATH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92-0224.02
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US-09-240-952-1
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Best Local Similarity
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                                                            APPLICATION NUMBER: 09/041,38
FILING DATE: 12-Mar-98
ATTORNEY/AGENT INFORMATION:
NAME: SVOBOda, Craig G.
REGISTRATION NUMBER: 39,044
REFERENCE/DOCKET NUMBER: P108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (619) 451-9628 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1178 GAGAAGGGGICTCTCCCAACATATTTCTCTTCTTGTGCCTCTCTCTCTTTATCACTTTTA 1237
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                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 inch, 1.44 Mb i
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                     SOFTWARE: WinPatin (Ger
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
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REFERENCE/DOCKET NUMBER: 92
TELECOMMUNICATION INFORMATION:
                                             TELECOMMUNICATION INFORMATION:
                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 20-JUL-1992
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                   COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 29-Jar CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                       CITY: South San Francisco
STATE: California
                  TELEFAX:
                              TELEPHONE:
                                                                                                                                                                                                                                                                                                                                      COUNTRY:
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La Fleur, Mon
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                               650/225-1489
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Neurons and Treating Ocular Diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Method of Preventing the Death of Retinal
                                                                                                                                                                                                                                         (Genentech)
                                                                                                                                            09/041,383
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                                                                                                                                                                                                      US/09/240,952
                                                                                                                                                                                                                                                                                    1.44 Mb floppy disk
                                                               P1088P1
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RESULT 15
US-09-484-970B-167
Sequence 167, Application US/09484970B
Patent No. 6426186
GENERAL INFORMATION:
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TOPOLOGY:
US-09-240-952-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 17
SOFTWARE: PERL PROGRAM
SEQ ID NO 167
LENGTH: 1234
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                     ; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. 6426186 333034.1
US-09-484-970B-167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 141; Conserv
                                                                                                                                                                                                                                                                                                                                                                     Query Match 2.8%;
Best Local Similarity 50.0%;
                                                                                                                                                                                                                                                                                                                                                   Matches 141;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Volkmuth, Wayne
APPLICANT: Walker, Michael G.
APPLICANT: Walker, Michael G.
APPLICANT: WOLK BONE REMODELING GENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JRRENT APPLICATION NUMBER: US/09/484,970B
JRRENT FILING DATE: 2000-01-18
      679
                                                                                                                                                                             559
                                                                                                              371 CAGATCAGAGGATGCTGGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTG 430
                                                                                                                                                                                                                431 CATGGATTTCAGAGGCAACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTT 490
                                                                                                                                                                                                                                                                                         251 CTGGGGTGGCCTGATCCACCTGTACACAGCCACAGCCACGGAACAGCTACCACCTGCAGAT 310
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              311 CCACAAGAATGGCCATGTGGATGGCGCACCCCATCAGACCATCTACAGTGCCCTGATGAT 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      214 CTCGGGGCGCCGGACCGGCAGCCTCTACTGCAGAGTGGGCATCGGTTTCCATCTGCAGAT 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  251 CTGGGGTGGCCTGATCCACCTGTACACAGCCACAGCCAGGAACAGCTACCACCTGCAGAT 310
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STRANDEDNESS: Single
                                                                                                                                                                    CTACCCGGATGGCAAAGTCAATGGATCCCACGAAGCCCAATATGTTAAGTGTTTTGGAAAT 618
GATGTCAAAAAAAGGAAAACTCCATGCAAGTGCCAAGTTCA---CAGATGACTGCAAGTT
                                                                                                                                                                                                                                                             CTCGGGGCGCCGGACCGGCAGCCTCTACTGCAGAGTGGGCATCGGTTTCCATCTGCAGAT 558
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Qy 491 CCAACACCAGACGCTGGAAAACGGGTACGACGTCTACCACTC 532
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Search completed: May 29, 2003, 00:07:03 Job time : 82 secs

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Maximum Match 100%
Listing first 45 summaries
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Pred. No. is the number of results predicted by chance to have

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

## Result 000 528 457.4 448.8 428 428 Score Query Match 204909 178533 204909 Length 290471 170200 76884 1869 2137 2137 2137 2137 2137 2137 2137 2157 1612 B AX351022 AX275042 BC018404 AB018122 BC017664 AX076894 AX092981 AX403730 AX454492 AX454499 AX249747 AX250100 AB021975 AX149492 AC125991 AX191715 AX097639 AX481448 AC130862 AC015538 AX156434 AX481451 AX156436 AF110400 AX358824 AX19171 AC130862 AX249749 AB037973 AX249747 Sequence AX250100 Sequence AB037889 Mus muscu AC103292 Rattus no AC1130862 Rattus no AC015538 Mus muscu AC125938 Mus muscu AC125991 Rattus no AX125991 Rattus no AX191715 Sequence AX097639 Sequence AX097639 Sequence AC008012 Homo sapi AX403623 Sequence AX464132 Sequence AX249749 Sequence AF263537 Homo sapi AB047858 Homo sapi AX191707 Sequence AX275042 Sequence BC018404 Homo sapi AX191709 Sequence AF263536 Mus muscu AB078777 Rattus no Description AB025718 Mus muscu Sequence Sequence Homo sapi 2 Sequence 7 Sequence 3 Homo sapi 1 Sequence Homo sapi Sequence Homo sapi Homo sapi

## ALIGNMENTS

AF263537 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM	AF263537  1612 bp mRNA linear PRI 14-DEC-2000 Homo sapiens FGF23 (FGF23) mRNA, complete cds. AF263537  AF263537.1 GI:9964291  Homo sapiens. Homo sapiens
KEYWORDS	Diagonal in Chi apolicat
SOURCE	Homo sapiens.
	Homo sapiens
	<pre>Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.</pre>
REFERENCE	1 (bases 1 to 1612)
AUTHORS	White, K.E., Evans, W.E., O'Riordan, J.L.H., Speer, M.C., Econs, M.J.,
	Lorenz-Depiereux, B., Grabowski, M., Meitinger, T. and Strom, T.M.
TITLE	Autosomal dominant hypophosphataemic rickets is associated with

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Submitted (03-MAY-2000) Medizinische Genetik, Goethestr.
Muenchen 80336, Germany
Location/Qualifiers
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Nat. Genet. 26 (3), 345-348 (2000)
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Strom, T.M.
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/db_xref="G1:9964292"
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MASDPLGVYRGGRVNTHAGGTGPEGCRPPAKFI"

MASDPLGVYRGGRVNTHAGGTGPEGCRPPAKFI"
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Qy 195 TGCAG Db 181 TGCAG Qy 255 GGTGG Qy 255 GGTGG Db 241 GGTGG Qy 315 AAGAA Db 301 AAGAA	75 61 135 121	Query Match Best Local Si Matches 1598;  Matches 15AATC Qy 15 GAATC	BASE COUNT	o b Et	REFERENCE 2 AUTHORS YAI TITLE Dii JOURNAL Sul Ltt	DEFINITION Homo fact, ACCESSION AB04 VERSION AB04 VERSION HOMO ORGANISM HOMO ORGANISM HOMO AUTHORS Shim REFERENCE 1 (ACCESSION MARMA
	GCCTGGGCCAGGAGAGTCCCGACAGGAGTGTCAGGTTTCAATCTCAGCACCAGCAGCACTCA 134	ttch 99.1%; Score 1598; DB 9; Length 3004; sal Similarity 100.0%; Pred. No. 0; 1598; Conservative 0; Mismatches 0; Indels 0; Gaps 0; GAATCCAGTCTAGGATCCTACCAGCTACTTGCAAAGGAAAAGGCAAAAGGAAAAGGCAGTAAG 74 [	/gene="hypf" /gene="hypf" /note="a candidate for the responsible gene for ADHR" /codon_start=1 /product="unmor-derived hypophophatemia inducing factor" /protein_id="BAB55889.1" /protein_id="BAB55889.1" /db_xref="d1:14196227" /translation="MICGARLELWYCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYT ATARWSYHLOHKNGHVDAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNI FGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSR RNEIFLHFNTFIFRHTRSAEDDSERDPLNYLKPRARMTPAPASCSQELPSAEDNSP MASDPLGVVRGGRVNTHAGGTGPEGCRPFAKPI" 812 a 731 c 672 g 789 t	1.3004 /organism="Homo sapiens" /db_xref="taxon:9606" 13004 /gene="hypf"	2 (bases 1 to 3004) 3 Yamashita,T. 5 Yamashita,T. Direct Submission Direct Submission Ltd., Pharmaceutical Research Lab., Miyahara 3, Takasaki, Gunma 370-1295, Japan (E-mail:tyamashita@kirin.co.jp, Tel:81273469789, Fax:81273461672)	Homo sapiens hypf mRNA for tumor-derived hypophophatemia inducing factor, complete cds.  AB047858  AB047858.1 GI:14196226  Homo sapiens cDNA to mRNA.  Homo sapiens thereia; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.  1 (sites)  1 (sites)  1 (sites)  2 Takeuchi, Y., Fujita, T., Fukumoto, S. and Yamashita, T.  Cloning and characterization of FGF23 as a causative factor of tumor-induced osteomalacia  2 TSG7444  2 TSG7444  2 TSG7444

95 TGTGCAAACCTTGACATTAACAGCTGAATGGGGCAAGTTGATGAAAACACTACTTTC 	D 64
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375 TCAGAGGATGCTGGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCT	β · Q

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Best Local Similarity
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             GGCGCACCCCATCAGACCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCTGGCTTT
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1 (bases 1 to 1211)
Conklin,D.C.
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llarity 100.0%;
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/db_xref="taxon:9606"
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location/Qualifiers
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AC008012  170200 bp DNA linear PRI 15-MAR-2002 Homo sapiens 12p13 BAC RPCI11-388F6 (Roswell Park Cancer Institute Human BAC Library) complete sequence.	TTTTAAGCATA 1243          TTTTAAGCATA 1211	GTAGAGAGAGGGGTCTCTCCCAACATATTTCTCTTCCTTGTGCCTCTCTCT	AGAACACCTTTCCCAATAGGAAACCCCAACAGGTAAACTAGAAATTTCCCCTTCATGAAG 1172 	TGTGAGAACCAACCITTGAGGCCCAAGTCATGGGGTTTCACCGCCTTCCTCACTCCATAT 1112	AGGTGACAGGGGCATGTATGGAATTTGCTGCTTCTCTGGGGTCCCTTCCACAGGAGGTCC 1052	TCCTCAGCAAACGCAGCTCTTCCCAAGGACCAGGTCCCTTGACGTTCCGAGGATGGGAA 992	GGCTGCCGCCCCTTCGCCAAGTTCATCTAGGGTCGCTGGAAGGGCACCCTCTTTAACCCA 932 	CCATTAGGGTGGTCAGGGGCGGTCGAGTGAACACGCACGC	CCGGCCTCCTGTTCACAGGAGCTCCCGAGCGCCGAGGACAACAGCCCGATGGCCAGTGAC 812	GACGACTCGGAGCGGGACCCCCTGAACGTGCTGAAGCCCCGGGGCCCGGATGACCCCGGCC 752	GAGATCCCCTAATTCACTTCAACACCCCCATACCACGGCGCACACCCGGAGCGCCCGAG 692	AGAGCCTTCCTGCCAGGCATGAACCCACCCCCGTACTCCCAGTTCCTGTCCCGGAGGAAC 632	GGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTGGGCCGGGCGAAG 572	TTIGGATCACACTATTITCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTGGAAAAC 512	GTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGCAACATT 452 	

AC008012 AC008012.8 HTG.

GI:5762548

Homo sapiens. Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

REFERENCE AUTHORS TITLE REFERENCE AUTHORS REFERENCE AUTHORS TITLE JOURNAL REFERENCE AUTHORS REFERENCE REFERENCE AUTHORS TITLE AUTHORS JOURNAL JOURNAL JOURNAL JOURNAL TITLE JOURNAL TITLE Dugan, S., Durbin, J., Forcum, J., Garcia, C., Gurrell, L. L., Hernandez, J., Issar, A., Jackson, L., Kneitz, S., Kondejewski, N., Lau, S., Leal, B., Lee, E., Lichtarge, O., Liu, W., Logan, O., Lu, J., Marondel, I., Martinez, C., Merscher, S., Miller, A., Montgomery, K., Oswal, G., Pampell, L.R., Parish, B.J., Perez, L., Rashid, N.D., Rives, C., Scherer, S.E., Shen, H., Shim, C., Simon, M., Vo, Q., Williamson, A., Worley, K.C., Xhang, A.M., Yang, R., Yu, W., Zhou, X., Kucherlapati, R., Nelson, D. and Gibbs, R.A. Submitted (15-MAR-2002) Human Genome Sequencing Center, Depa of Molecular and Human Genetics, Baylor College of Medicine, Baylor Plaza, Houston, TX 77030, USA On Aug 24, 1999 this sequence version replaced gi:5708398. INFORMATION: http://www.hgsc.bcm.tmc.edu/ or email Submitted (28-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA Submitted (09-OCT-1999) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA of Molecular and Human Baylor Plaza, Houston, 4 (bases 1 to 170200) Submitted (10-JHL-1999) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA 3 (bases 1 to 170200) of Molecular and Human Baylor Plaza, Houston, 6 (bases 1 to 170200) Worley, K.C. Direct Submission Worley, K.C. Direct Submission Worley, K.C. Direct Submission Direct Submission Worley, K.C. Submitted Direct Submission Worley, K.C. Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 170200) Unpublished (bases 1 to 170200) (bases 1 to 170200) (24-AUG-1999) Human Genome Sequencing Center, Department lar and Human Genetics, Baylor College of Medicine, One aza, Houston, TX 77030, USA Arenson, A.D., Bouck, J., Bunac, C., Chen, Z., Ding, Y., Durbin, J., Forcum, J., Garcia, C., Gorrell, J.H., Department

CLONE LENGTH: This sequence does not necessarily represent the entire insert of this clone. Overlapping regions of clones are o sequenced and submitted once, so the sequence for the remainder the insert may be found in the record for the adjacent clones. Overlapping clones are noted at the beginning and end of the Overlapping clones are noted at the beginning and Features listing. only r of

COMMENT

gc-help@bcm.tmc.edu

ANNOTATION OF FEATURES:

STSs are identified using ePCR (Genome Res. 7:541-550) searches of a local database that includes entries from dbSTS, GDB, and local mapping efforts.

Repeats are identified using RepeatMasker (A. Smit and P. Green, unpublished.) for Human and Mouse sequences in Genes and Region of sequence similarity are identified by BLAST (Nuc. Acids Res. 25:3389-3402) similarity (expect < 1e-34) to the EST and CDWA sequences. Genes demonstrate at least two exons flanked by consensus splice sites that maintained sequence continuity across the splice junctions. Sequences that are not identical matches are annotated as similar.

standard of double strand coverage with a minimum of 2 clones and 2 reads with no ambiguities or 2 chemistries with a minimum of 2 clones and 3 reads with no ambiguities. If the sequence quality for a region does not meet this standard, it will be indicated in the SEQUENCING READ COVERAGE: Sequencing is completed to a minimum Low Coverage.

QUALITY OF INDIVIDUAL BASES: This sequence meets stringent quality standards - estimated error rate less than 1 per 10,000 bases. Reports of lowest quality individual bases and measures of base quality are listed below. Description of the metrics can be found at IRL: http://gc.bcm.tmc.edu:8088/quality.info/genbank.annotation

## QUALSTAT-REPORT----

Summary Statistics

167994	164929	164916	164836	154839	154838	154830	136246	136219	131884	116749	101544	99721	99719	97501	97197	56619	51576	50944	33904	14775	Position			Number of co	on o	Average error	<	Contig length
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Distribution of Quality < 40

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Db 133944 TGTTCACAGGAGCTCCCGAGCGCCGAGGACAACAGCCCGATGGCCAGTGACCCATTAGGG 134003
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RESULT 5 AX403623 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REPERENCE AUTHORS	134064 134124 1002 134124 1002 134184 1062 134244 1122 134304 1182 134364 1134364 1134424 134424 134664 134664 134604 1134604 1134604 1134604 1134604 1134724 1134724	Qy 822 Db 134004
AX403623 Sequence 51: AX403623 AX403623.1 human. Homo sapieni Bukaryota; I Mammalia; B 1 Mammalia; B 1 Ashkenazi, A Ferrara, N., Grimaldi, C.,	CCCTTCGCCAAGTTCATGGGTCGCTGGAAGGGCACC CCCTTCGCCAAGTTCATCTAGGGTCGCTGGAAGGGCACC CCCTTCGCCAAGTTCATCTAGGGTCGCTGGAAGGGCACC CCCTTCGCCAAGTTCATCTAGGGTCGCTGGAAGGGCACC AAACGCAGCTCTCCCAAGGACCAGGTCCCTTGACGTTC AAACGCAGCTCTTCCCAAGGACCAGGTCCCTTGACGTTC CGGCATGTATGGAATTTGCTGCTTCTCTGGGGTCCCTTC CAACCTTTGAGGCCCAAGTCATGGGTTTCACCGCCTTC CAACCTTTGAGGCCCAAGTCATGGGTTTCACCGCCTTC CAACCTTTGAGGCCCAAGTCATGGGTTTCACCGCCTTC CAACCTTTGAGGCCCAAGTCATGGGTTAAACTAAAATTTCC CAACCTTTGAGGCCCAACAGTCATGGGTTTCACCGCCTTC TTCCCAATAGGAAACCCCAACAGTTAAACAAAAAATTTCC CAACCTTTGAGGCCCAACAGTTAAACAAAAAAAAATTTCC CAACCTTTGAGGCCCAACAGTTAAACAAAAAAAAATTTCC CAACCTTTGAGGCCCAACACAGTTAAACAAAAAAAAAA	GTGGTCAGGGGCGG
om Patent W 21437088 2167086 2004; Chorda ria; Primat ria; Primat Fia; Primat Ger, H., Ger	TITICGCCAAGTTCATCTAGGGTCGCTGGAAGGGCACCTCTTAACCCAIGGGCACCTTTTAACCCAIGGTCCCTTTGACCCAIGTTCATCTAGGTCCGGGAGGTCGCTTGACGGAGGTCCCTTTAACCCATCCGTTCGCAAGTTCATCTAGGGTCGCTGGAAGGGCACCTCTTTAACCCATCCGCGGAGCTCTCCCAAGGACCAGGACGAGGCACCTCTCTCAGGATGGAAAGGTCCCTTCCCAAGGACGATCGAAGGTCCCTTGACGTTCCCAAGGATGGAAAGGTCCCTTGACGTTCCCAAGGATGGAAAGGTCCTTTGACGCTTCCCAAGGATGGTCCTTTGACGGTTCCCAAGGATGGAAAGGTCCTTTGACGGAAGTTCCCAAGGATCATGAAGGTCCTTTGACGGTCCTTCAAGGAAGG	
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                                                                                            AACCCACCCCGTACTCCCAGTTCCTGTCCCGGAGGAACGAGATCCCCCTAATTCACTTC
                                                                                                                                            CCTCAGTATCACTTCCTGGTCAGTCTGGGCCGGGCGAAGAGAGCCTTCCTGCCAGGCATG
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Genentech Inc. (US)
Location/Qualifiers
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Mammalia; Eutheria;
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                                      GAAAACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTGGGCCGG
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Sequence 3
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Patent: WO 0166596-A 3 13-SEP-2001;
CHIRON CORPORATION (US) ; Kyoto University (JP
Location/Qualifiers
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata
Eukaryota; Metazoa; Chordata; Craniata; Hominida
Mammalia; Eutheria; Primates; Catarrhini; Hominida
1 (bases 1 to 756)
Itoh,N. and Kavanaugh,M.W.
Human fgf-23 gene and gene expression products
Patent: WO 0166595-A 3 13-SEP-2001;
CHIRON CORPORATION (US); Kyoto University (JP)
Location/Qualifiers
               AACATTTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCCAGACGCTG
                                                   GGCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGC
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Pred. No. 1.4e-171;
0; Mismatches 0;
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AB037973.1 G
                                                                                                                                        Direct Submission
Submitted (03-FEB-2000) Nobuyuki Itoh, Kyoto University, Graduat School of Pharmaceutical Sciences, Department of Genetic Biochemistry; Yoshida-Shimoadachi, Sakyo, Kyoto, Kyoto 606-8501, Japan (B-mail:itohnobu@pharm.kyoto-u.ac.jp, Tel:81-75-753-4540, Fax:81-75-753-4600)
                                                                                                                                                                                                                                                   Biochem. Biophys. Res. 20490027
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/db_xref="G1:10119774"
/translation="MLGARIHWYCALCSYCSMSYLRAYPNASPLLGSSWGGLIHLYT
/translation="MLGARIHWYCALCSYCSMSYLRAYPNASPLLGSSWGGLIHLYT
ATARNSYHLGHYDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNI
FGSHYFDDENCRFQHQTLENGYDYHSPQYHFLVSLGRAKRAFLFGMMPPPYSQFLSR
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Luethy, R., Yang, R., Suggs, S. and Sarosi, I. Fibroblast growth factor-23 molecules and Patent; WO 0161007-A 1 23-AUG-2001; Amgen Inc. (US)
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ATARNSYHLQHKWGHVDGAPHQTIYSALMNIRSEDAGFVVITGVMSRRYLCMDFRONI
FGSHYFDPENCRPQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSR
RNEIPLHPNTFIPRHTRSAEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSP
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/db_xref="taxon:9606"
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Patent: WO 0149740-A 3 1
ZymoGenetics, Inc. (US)
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1 (bases 1 to 753)
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/product="rGP23"
/protein_id="AAG09916.1"
/brotein_id="AAG09916.1"
/db_xref="GI:9964290"
/translation="MLGTCLRLLVGVLCTVCSLGTARAYPDTSPLLGSNWGSLTHLYT
ATARTSYHLQIHADGHYDGTPHQTIYSALMITSSDAGSVVITGAMTRRETLCNDLHGNI
FGSLHFSPENCKFROWTLENGYDVYLSQKHYLVSLGRAKRIFOPGTNPPFSQFLAR
RNEVPLLHFYTVRPRRHTRSAEDPPERDPLNVLKPRPRATPVPVSCSRELPSAEEGGP
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Rattus norvegicus FGF23 m
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AB078777
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Rattus norvegicus fgf23
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2 (bases 1 to 756)
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Bukaryota; Metazoa;
Mammalia; Eutheria;
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Query Match
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Matches 564;
CCGGCCCCGGCCTCCTGTTCACAGGAGCTCCCGAAGGACGACGAGACAACAGCCCGATGGCC
                                                                               GCCGAGGACCCGCCCGAGCGCGACCCGCTGAATGT
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Direct Submission

Submitted (24-JAN-2002) Nobuyuki Itoh, Kyoto University Graduate Submitted (24-JAN-2002) Nobuyuki Itoh, Kyoto University Graduate School of Pharmaceutical Sciences, Department of Genetic School of Pharmaceutical Sciences, Sexyo, Kyoto 606-8501, Japan Biochemistry; Yoshida-Shimoadachi, Sakyo, Kyoto 606-8501, Japan Pharmailitechnobu@pharm.kyoto-u.ac.jp, Tel:81-75-753-4540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (E-mail:itohnobu@pharm.kyoto-u.ac.jp, Fax:81-75-753-4600)
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/codon_start=1
/product="fibroblast growth
/protein_id="BAB84108.1"
/db_xref="GI:18376671"
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0; Mismatches 192
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Dp 66	AGEGRACICCTGGGAGTGCTGCGCAGAGGCCGGGGAAGGC 866
Ωу 86	7 CCGGAAGGCTGCCGCCCCTTCGCCAAGTTCATCTAG 902
Db 72	
RESULT 15 AX249747 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS	AX249747 756 bp DNA linear PAT 28-SEP-2001 ON Sequence 1 from Patent WO0166596. N AX249747 AX249747.1 GI:15864368
SOURCE ORGANISM	house mouse. SM Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 3 1 (bases 1 to 756)
AUTHORS TITLE JOURNAL	It (Dases 1 CO /36) Itoh, N. and Kavanaugh, M. W. Human fgf-23 gene and gene ex Patent: WO 0166596-A 1 13-SEP CHIRON CORPORATION (US) ; Kyo
BASE COUNT	rce 1756 /organism="Mus musculus" /db_xref="taxon:10090" 141 a 251 c 217 g 147 t
Query Mai Best Loca Matches	Match 26.6%; Score 428; DB 6; Length 756; social Similarity 72.9%; Pred. No. 2e-92; Indels 0; Gaps 0; Mismatches 205; Indels 0; Gaps 0;
Qy 147 Db 1	ATGTTGGGGGCCCGCCTCAGGCTCTGGGTCTGTGCCTTGTGCAGCGTCTGCAGCATGAGC 206
Оу 207	GTCCTCAGAGCCTATCCCAATGCCTCCCCACTGCTCGGCTCCAGCTGGGGTGGCCTGATC 266
Db 61	
Qy 267 Db 121	CACCTGTACACAGCCACAGCCAGGAACAGCTACCACCTGCAGATCCACAAGAATGGCCAT 326
Qy 327 Db 181	GTGGATGGCGCACCCATCAGACCATCTACAGTGCCCTGATGATCAGATCAGAGGATGCT 386
Oy 387	GCTTTGTGGTGATTACAGGTGTGATGAGCAGAAGATACCTCTGCATGGATTTCAGAGGC 446
Qy 447 Db 301	AACATTTTGGATCACACTATTTCGACCCGGAGAACTGCAGGTTCCAACACCAGACGCTG 506
Qy 507 Db 361	GARARACGGGTACGACGTCTACCACTCTCCTCAGTATCACTTCCTGGTCAGTCTGGGCCGG 566
Qy 567 Db 421	GCGAAGAGAGCCTTCCTGCCAGGCATGAACCCACCCCGTACTCCCAGTTCCTGTCCCGG 626
Qy 627 Db. 481	AGGAACGAGATCCCCCTAATTCACTTCAACACCCCCATACCACGGGGGACACCCGGAGC 686

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721	867	661	807	601	747	541	687
721 GCGGATAGGTGTCGCCCCTTTCCCCAGGTTCGTCTAG 756	867 CCGGAAGGCTGCCCCTTCGCCAAGTTCATCTAG 902	AGCGATCCTCTGGGGGTGCTGCGCAGAGGCCGTGGAGATGCTCGCGGGGGCGCGGGAGGC 720	AGTGACCCATTAGGGGTGGTCAGGGGCGGTCGAGTGAACACGCACG	CCTGTGCCTGTATCCTGCTCTCGCGAGCTGCCGAGCGCAGAGGAAGGTGGCCCCGCAGCC 660	747 CCGGCCCCGGCCTCCTGTTCACAGGAGCTCCCGAGCGCCCGAGGACAACAGCCCGATGGCC 806	GCCGAGGACCCACCCGAGCGCACCCACTGAACGTGCTCAAGCCGCGGGCCCCGCGCCCACG 600	687 GCCGAGGACGACTCGGAGCGGGACCCCCTGAACGTGCTGAAGCCCCGGGCCCGGATGACC 746

Search completed: May 29, 2003, 01:28:07 Job time : 4859 secs

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Result
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Maximum Match 100%
Listing first 45 s
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Maximum DB seq length: 200000000
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181.5
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1360
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1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
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     GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
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sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                 sp_organelle:*
sp_phage:*
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                                                                                                                                                                                                                           Length
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                            Q95K97
Q9YGD8
Q9YGD8
Q8R4X0
3 Q42407
                                                                                                       Q8VI82
Q8VI80
Q9DDN0
Q8R5L9
Q9YH31
Q9YH31
Q90XQ5
Q90XQ1
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                                                                                  Q8VCY9
                                                                                               Q9ERW3
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                                                                Q8vi81 rattus norv
Q9erw3 rattus norv
Q8vcy9 mus musculu
Q95k97 macaca fasc
O9ygd8 oncorhynchu
O8r4x0 rattus norv
O42407 gallus gall
O8qg59 ambystoma m
Q9dfc9 brachydanio
                                                                                                                   08vi82 rattus norv

08vi80 rattus norv

09ddn0 gallus gall

08r519 rattus norv

09vn31 notophthalm

090xq5 ambystoma m

090xq1 ambystoma m
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123.5 9.1	9.	4.5 9.	9.	125.5 9.2	9.	9.	٠	9.	9.	9.	9.	9.		9.	9.			132 9.7	9.	9.	_	7.5 10.	9.5 10.	.5	10.	10.	.5 10.	
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Q8T8A3	1 Q99517	_	o	11 Q8VI79	L3 Q9W6A1					6 Q95L47						11 Q9EST9		Ω			11 Q8R5L7		_	n		တ္ထ	13 Q9IAI3	13 Q90Y71
. Q8t8a	Q99517	d180	ps8Q	Q8vi	Q9w6a1	Q9i	. Q924b4	Q60487	Q90	Q95147	Q9ern5	Q9erq5	Q90xp9	· Q9es18	Q9e	Q9est9	Q9c	Q9n1	28r	Q9i	QBr	Q9iai5	28V	d96b	089	W6Ö	Q9iai3	.090
ciona	homo	homo	cani	79 rattus	gallus	gallus	rattus	487 cavia porce	w	47 mustela vis	rattus		xp9 ambystoma	mus	mus mus	ratt	sx5 mus musculu	b9 ovis aries	rattus	gallus	rattus	gallus	rattus	59 homo sapien	rattus	gallus	gallus	xenopus
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## ALIGNMENTS

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121 ENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNEIPLIHFNTFIPRRHTRS 180	61 VDGTFHQTIYSALMITSEDAGSVVIIGAMTRRFLCMDLRGNIFGSYHFSPENCRFRQWTL 120	61 VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL 120	1 MLGACLRLLVGALCTVCSLGTARAYSDTSPLLGSNWGSLTHLYTATARNSYHLQIHRDGH 60	1 MLGARLRLWVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARNSYHLQIHKNGH 60	Best Local Similarity 71.7%; Pred. No. 3.9e-86; Matches 180; Conservative 26; Mismatches 45; Indels 0; Gaps 0.	71.9%; Score 978;	SEQUENCE 251 AA; 27911 MW; 35A229E1B3900593 CRC64;	ProDom; PD000831; HB/F growthtact; 1.	Pfam; PF00167; FGF; 1.	InterPro; IPR002209; HB/F_growthfact.	•	Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.	"Rattus norvegicus fgf23,";		SEQUENCE FROM N.A.		NCHT TAYID=10116, ACCUMENTA, SCHAROMINE, MALIAGE, MALLINGE, MACHUS.	Riitheria: Rodentia: Sciirromathi: Miridae:		FGF23.	growth factor 23.	(TrEMBLrel. 21, Last annotation	(TrEMBLrel, 20,	01-MAR-2002 (TrEMBLrel. 20, Created)		OSVIS2 PRELIMINARY: PRT: 251 AA.	ДТ 1

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RESULT OF COLUMN COLUMN
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Matches 67
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Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AB078901; BAB84299; Hs/F growthfact.
InterPro; IPR002209; Hs/F growthfact.
InterPro; IPR002348; IL1_HBGF.
Pfam; PF00167; FGF; 1.
           NCBI_TaxID=9031;
                                                                                                         Gallus gallus (Chicken)
Eukaryota; Metazoa; Cho
                                                                                                                                                                                                                                                           01-MAR-2001
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00262; IL1HBGF.

ProDom; PD000831; HB/F_growthfact; 1.

SMART; SM00442; FGF; 1.
                                                                           Archosauria; Aves;
                                                                                                                                                                                                                      Fibroblast growth
                                                                                                                                                                                                                                                                                                                                   01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                            Q9DDNO;
                                                                                                                                                                                                                                                                                                                                                                                                          Q9DDN0
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01-WAR-2002 (TrEMBLrel. 20, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
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Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Rat).
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67; Conserv
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(TrEMBLrel. 16, I
2 (TrEMBLrel. 21, I
growth factor 19.
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                                                                       Neognathae;
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                                                                                                         Chordata;
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Last sequence update)
Last annotation updat
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Pred. No. 4.5e-15; ...
                                                               Craniata; Vertebrata; Euteleostomi;
; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rattus.
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Best Local :
                                                                                                                                                                          "Rattus norvegicus FGF3 mRNA.";
Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases
EMBL, AB079262; BAB84564.1; -
SEQUENCE 245 AA; 27150 MW; C9305D307E7D0648 CRC64;
                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                        01-JUN-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                              Q8R5L9
                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                   Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                              01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                Q8R5L9;
  153
                         105
                                                  102
                                                                                                                                                                                                                            Itoh N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00247; HEGF_FGF; UNKNOWN 1.
SEQUENCE 227 AA; 24568 MW; 875D76FBFD09F8E2 CRC64;
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ProDom; PD000831; HB/F growthfact;
SMART; SM00442; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR002209; HB/F growthfact. InterPro; IPR002348; IL1_HBGF. Pfam; PF00167; FGF; 1.
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HSSP; P09038; 1BFG.
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Ladher R.K., Anakwe K.U., Gurney A.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Science 290:1965-1968(2000).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Identification of Synergistic Signals
                                                                                                                                                                                                                                                                                                                                                                                                                                           188
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                                                                     LYCAT---KYHLQLHESGRYNGSLENSAYSILEITAVEVGYVAIKGLESGRYLAYNKRGR 104
                                                                                             LYTATARNSYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGN 101
                          LYASEHYNAE
                                               IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPP-------
-PYSQFLSRRNEIPLIHFNTPIPR----RHTRSAEDDSERDPLNVLKPRARMTPAPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAALALLGIAAAAAARSL--PLPDVGGPHVNYGWGEPIRLRHLLHRPGKHGLFSCFLRI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HKNGHVDGAPHOTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDFENCRF 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                               -IHFNTPIPRRHTRSAEDDSERDPLNVLKPRARMTPAPASCSQE
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                                                                                                                                     Similarity
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                        CEFVERIHELGYNTYASRLYRTGPSGPGARRQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAG39478.1;
                                                                                                                                                                                                                                                                         Chordata;
Rodentia;
                                                                                                                                                                         27150 MW;
                                                                                                                                    13.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14.3%; Score 194.5;
29.9%; Pred. No. 9.70
tive 30; Mismatches
                                                                                                                        29;
                                                                                                                        Score 181.5;
Pred. No. 1.9e
29; Mismatches
                                                                                                                                                                                                                                                                                                                          Last sequence up
                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                        C9305D307E7D0648 CRC64;
                                                                                                                                                                                                                                                                                                                                                                            245
                                                                                                                                     1.9e-09;
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                                                                                                                                              11;
                       -PGAQRPWYVSVNGKG
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 204
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                       161
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Best Local S
Matches 39
                                                                                                                                                                                                                                                                                                                          Q90XQ5;
01-DEC-2001
01-DEC-2001
01-JUN-2002
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SMART; SMO0442; FGF; 1.

PROSITE; PS00225; CRYSTALLIN BETAGAMMA; UNKNOWN_1.

PROSITE; PS00247; HBGF FGF; 1.

PROSITE; PS00247; HBGF FGF; 1.

PROSITE: PS00247; HBGF FGF; 1.
            SEQUENCE FROM N.A.

MEDLINE=21439472; PubMed=11555861;

Christensen R.N., Weinstein M., Tassava R.A.;

"Fibroblast growth factors in regenerating limbs of and semi-quantitative RT-PCR expression studies.";

J. Exp. Zool. 290:529-540(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Putative fibroblast growth factor-4.
Notophthalmus viridescens (Eastern newt) (Triturus viridescens).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Caudata; Salamandroidea; Salamandridae;
                                                                                                                                                                                                                                                                                               01-DEC-2001 (TYENBLIFE! 19, Created)
01-DEC-2001 (TYENBLIFE! 19, Last seque
01-UNY-2002 (TYENBLIFE! 21, Last annot
Fibroblast growth factor 4 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSSP;
  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00262; IL1HBGF.
ProDom; PD000831; HB/F_growthfact;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Putative Newt Fibroblast Submitted (OCT-1996) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-1999
01-JUN-2002
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                                                                                                                                                                               NCBI_TaxID=8296;
                                                                                                                                                                                                              Ambystoma
                                                                                                                                                                                                                                  Amphibia; Batrachia;
                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                Ambystoma mexicanum (Axolotl)
                                                                                                                                                                                                                                                                                                                                                                                                                           Q90XQ5
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Pfam; PF00167; FGF; 1.
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AF360984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U76998; AAC98812.1;
P09038; 1BFF.
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IL1_HBGF.
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HB/F_growth
                                                                                                                                                                                                                                  Caudata;
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21,
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Last sequence up
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Pred. No. 2.6e-07
6; Mismatches 4:
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                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Salamandroidea; Ambystomatidae;
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                                                               Ambystoma:
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                                                            Cloning
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Best Local Similarity
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Best Local :
Q8VI81;
Q8VI81;
01-MAR-2002
01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                              NON TER
NON TER
SEQUENCE
                                                                                                                                                                                                                                                               ProDom; P
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ambystoma maculatum (spotted salamander).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Caudata; Salamandroidea; Ambystomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-DEC-2001 (TREMBLrel. 19, Created)
01-DEC-2001 (TREMBLrel. 19, Last sequence up
01-UN-2002 (TREMBLrel. 21, Last annotation
Fibroblast growth factor 4 (Fragment)
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                                                                                                                                                                                                                                                                                                 Pfam; PF00167; FGF;
                                                                                                                                                                                                                                                                                                                                                             Christensen R.N., Weinstein M., Tassava R.I "Fibroblast growth factors in regenerating
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=43114;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ambystoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q90XQ1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001064;
InterPro; IPR002209;
Pfam; PF00167; FGF; 1
                                                                                                                                                                                                                                                                                                                     interPro;
                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=21439472; PubMed=11555861;
                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                      111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           111
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                                                                                                 71
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51 YHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDP 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                       Exp.
                                                                                                                                                                                                                                                                                                                               semi-quantitative RT-PCR expression Exp. Zool. 290:529-540(2001). L; AF360988; AAL16961.1; -.
                                                                                                                                                             YHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDP 110
                                                                                                 EECKFKEPLLANNYNAYESROYPGMYIALSKNGRTKR
                                                                                                                     ENCREQHQTLENGYDVYHSPQYH----FLVSLGRAKR
                                                                                                                                         FHVQVLPDGKIHGTHNENRYSLLEISPVERGVVSILGVKSALFLAMNNRGKLYGSKQYS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EECKFKETLLANNYNAYESROYPGMYIALSKNGRTKRGNRVSPTMN----VTHFLPR 123
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FHVOVLPDGRIHGTHNENRYSLLEISPVERGVVSILGVKSALFLAMNNRGKLYGSKQYN-
                                                                                                                                                                                     35;
                                                                                                                                                                                                                                                                        PD000831; HB/F growthfact; 1.
; PS00225; CRYSTALLIN_BETAGAMMA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                             PS00247; HBGF_FGF; UNKNOWN
                                                                                                                                                                                                                                                                                                       IPR002209; HB/F_growthfact.
                                                                                                                                                                                                                                                                                                                     IPR001064; Crystallin
                                                                                                                                                                                                                              111
111 AA;
                                           PRELIMINARY;
                                                                                                                                                                                     Conservative
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                                                                                                                                                                                               11.1%;
36.1%;
                                                                                                                                                                                                                               12607 MW;
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                                                                                                                                                                                     16;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 157; DB
Pred. No. 1.9e
18; Mismatches
                                                                                                                                                                                               Score
Pred.
                                           PRT;
                                                                                                                                                                                                                               4A3A52ED39001057 CRC64;
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                                                                                                                                                                                     Mismatches
                                                                                                                                                                                               150.5; DB 1
No. 6.8e-07;
                                                                                                                                                                                                                                                              Ξ.
                                          218
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cing limbs
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                                                                                                                     143
                                                                                                 107
                                                                                                                                                                                                        DB 13;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
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(TrEMBLrel. (TrEMBLrel. (TrEMBLrel.

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Created)

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RESULT
Q9ERW3
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                                                     Query Match
Best Local
     Query
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01-MAR-2001
01-JUN-2002
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ProDom; PD000831; HB/F growthfact; 1.

SMART; SM00442; FGF; 1.

PROSITE; PS00247; HBGF FGF; UNKNOWN 1.

SEQUENCE 218 AA; 25207 MW; ED898684B5307C58 CRC64;
                                        PRINTS; PRO0262; ILLHBGF.
ProDom; PD000031; HB/F growthfact;
SMART; SM00442; FGF; 1.
PROSITE; PS00240; HBGF FGF; 1.
SEQUENCE 192 AA; 21604 MW; 7736
                                                                                                                                                                                                                                               Xiao H., Huang Q., Zhang F., Guo C., Chen Z., I "Rattus norvegicus fibroblast growth factor 13 Submitted (MAY-2000) to the EMBL/GenBank/DDBJ (EMBL; AF271786; AAG15492.1; -. HSSP; P31371; 1G82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Rattus norvegicus FGF15.";
Submitted (JAN-2002) to the EMBL/GenE
EMBL; AB078900; BAB84298.1; -.
InterPro; IPR002209; HB/F growthfact.
InterPro; IPR002348; II1_HBGF.
Pfam; PP00167; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
TISSUE=DORSAL ROOT GANGLION;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9ERW3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9ERW3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus
                                                                                                                                                                        InterPro; IPR002209; HB/F growthfact.
InterPro; IPR002348; IL1_HBGF.
Pfam; PF00167; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fibroblast growth
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     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RMVEDVDHLVKSPS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAK-RA 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLFLYGWGKITRLQYLYSAGPYVSNCFLRIRSDGSVDCEEDQNERNLLEFRAVALKTIAI 99
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (TrEMBLrel. 16, C
1 (TrEMBLrel. 16, I
2 (TrEMBLrel. 21, I
growth factor 13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          215
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26.3%;
  10.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 149.5;
Score 147.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 2e-06; 
i; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus
                                                7736A3671677B263 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence update)
annotation update)
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Length 192;

Q95K97

PRELIMINARY;

PRT;

208

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RESULT 11
Q95K97
ID Q95K9
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted DEC-2001) to the EMBL/GenB
EMBL, BC018238; AAH18238.1; -.
MGD; MGI:109178; Fgf13.
InterPro; IPR002209; HB/F growthfact.
InterPro; IPR002348; IL1_HBGF.
Pfam; PF00167; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-UUN-2002 (TrEMBLrel. 21, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00247; HBGF FGF; UNKNOWN 1.
SEQUENCE 245 AA; 27587 MW; 5B96D41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00262; IL1HBGF.
ProDom; PD000831; HB/F_growthfact;
SMART; SM00442; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.;
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
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                                                                                                                           211
                                                                                                                                                                            215
                                                                                                                                                                                                                                                                           156
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.7 GGLIHLYTATARNSYHLQIHKNGHVDGAPHQ-TIYSALMIRSEDAGFVVITGVMSRRYLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QFLSRRNEIPLIHFNTPIPRRHTRSAEDDSERDPLNVLKPRARMTPAPASCSQ-ELPSAE
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                                                                                                                           DITEFSRSGSGTPTKSRSVSGVLNGGKSMSHNEST
                                                                                                                                                                                                                                                                      QFLSRRNEIPLIHFNTPIPRRHTRSAEDDSERDPLNVLKPRARMTPAPASCSQ-ELPSAE
                                                                                                                                                                                                                                                                                                                                                                       MDFRGNIFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MNSEGYLYTSEHFTPE-CKFKESVFENYYVTYSSMIYR----QQQSGRGWYLGLN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDFRGNIFGSHYFDPBNCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYS
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                                                                                                                                                                                                                                                                                                                       MNSEGYLYTSEHFTPB-CKFKESVFENYYVTYSSMIYR----QQQSGRGWYLGLN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                             -KEGEJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Mouse)
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                                                                                                                                                                         NSPMASDPL-GVVRGGRVNTHAGGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 147.5; Pred. No. 3.6e
31; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 2.6e-06;
1; Mismatches 81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5B96D41AC3A3DF78 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .6e-06;
les 81;
                                                                                                                                                                         239
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                                                                                                                                                                                                                          -KPAAHFLPKPLKVAMYKEPSLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -KPAAHFLPKPLKVAMYKEPSLH 157
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                                                                                                                                                                                                  mammalian vertebrate: Continuous expressi
fiber hyperplasia.",
Biochim. Biophys. Acta 1443:305-314(1998)
EMBL; Y16850; CAA76422.1; -
HSSP; P31371; 1G82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncori NCBI TaxID=8022;
                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE=99096461; PubMed=9878802;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
PORTO (Trembler)
POR
                                                   Pfam; PF00167; PGF;
PRINTS; PR00262; IL1
                                                                                                             InterPro; IPR001064; Crystallin.
InterPro; IPR002209; HB/F growth
InterPro; IPR002348; IL1_HBGF.
                                                                                                                                                                                                                                                                                                                                                                                "Identification of a fibroblast
                                                                                                                                                                                                                                                                                                                                                                                                                      Rescan
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Osada N., Hida M., Kusuda J., Tanuma R., Iseki
Suzuki Y., Sugano S., Hashimoto K.;
"Isolation of full-length cDNA clones from mac
libraries.";
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ
EMBL; AB063051; BAB60779.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-2001 (TrEMBLrel. 19, Cr
01-DEC-2001 (TrEMBLrel. 19, La
01-JUN-2002 (TrEMBLrel. 21, La
Hypothetical 23.5 kDa protein
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SEQUENCE 20
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01-DEC-2001
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PROSITE; PS00247; HBGF_FGF; UNKNOWN_1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNE----IP
PR00262; IL1HBGF.
PD000831; HB/F_growthfact;
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208 AA; 2
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IL1_HBGF.
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Pred. No. 3.7e
20; Mismatches
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Best Local
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                  Fibroblast growth factor Gallus gallus (Chicken). Eukaryota; Metazoa; Chord Archosauria; Aves; Neogna
             Archosauria;
Gallus.
                                                                                            042407;
01-JAN-1998
                                                                                                                     042407
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01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
NCBI_TaxID=9031;
                                                                      01-JUN-1998
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                              Liu C., Dib-Hajj S.D., Waxman S.G.;
"Fibroblast growth factor honologous factor-4D.";
Submitted (FEB-2001) to the EMBL/GenBank/DDBJ dat
EMBL; AF348523; AAL83904.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rattus norvegicus (Rat).
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PROSITE; PS00225; CRYST
PROSITE; PS00247; HBGF_
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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                                                                                                                                                                                                                                                                                               PHQTIYSALMIRSEDAGFYVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTLENGY
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                                                                   3 (TrEMBLrel. 05,
3 (TrEMBLrel. 06,
2 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                        211 AA;
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                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                           factor 10
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HBGF FGF; 1.
; 23375 MW; BB883328F17EB6E4 CR
                                                                                                                                                                                                                            -QOESGRAWFLGLNKEGQVMKGNRVKKTKPAAHFLPKPLEVAM---YRE
                       Neognathae;
                                   Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                         23346 MW;
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Last
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                                                                                                                                                                                                                                                                                                                                                                                     Score 144;
                    Craniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae; Phasiani
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Sciurognathi; Muridae;
                                                                                                                      PRT;
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                                                                     sequence update)
annotation updat
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78;
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; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -FLP
                                                                                                                                                                                                                                                                                                                                                                                                211;
                       Phasianinae;
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Best Local Similarity
Matches 47; Conser
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Best Local Similarity
Matches 38; Conserv
                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

MEDLINB=21826199; PubMed=11836784;

Christensen R.N., Weinstein M., Tassava R.A.;

"Expression of fibroblast growth factors 4, 8, and 10 in limbs,
flanks, and blastemas of Ambystoma.";
Lev. Dyn. 223:193-203(2002).

EMBL; AY034453; AAK59700.1; -.

SEQUENCE 201 AA; 22994 MW; 89EA1E61806A6F57 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [1]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=97330690; PubMed=9187149;
Ohuchi H., Nakagawa T., Yamamoto A., Araga A., Ohta T.,
Yoshioka H., Kuwana T., Nohno T., Yamasaki M., Itoh N.,
"The mesenchymal factor, FGF10, initiates and maintains
of the chick limb bud through interaction with FGF8, an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR002209; HB/F_growthfact.
Pfam; PF00167; FGF; 1.
ProDom; PD000831; HB/F_growthfact; 1.
SMART; SM00442; FGF; 1.
SEQUENCE 212 AA; 23631 MW; AB4C0B32C72A0D90 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ambystoma mexicanum (Axolotl).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2002
01-JUN-2002
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HSSP; P31371; 1G82.
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Ambystoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amphibia; Batrachia; Caudata; Salamandroidea; Ambystomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                        WCBI_TaxID=8296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           150 FN-SDCKLKERIBENGYNTYASLNWKHNGRQMFVALNGRGATKRGQKTRRKNTSAHFLP 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 108 FDPENCRFQHQTLENGYDVY-----HSPQYHFLVSLGR--AKRA-----FLP 147
140 KLKERMEENKYNTYASYKWRH--
                               114 RFQHQTLENGYDVYHSPQYHFLVSLGRAKRAF--LPGMNPPPYSQFLSRRN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 NSYHLQIHKNGHVDGAPHQTI-YSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHY 107
                                                                                                                                                              6 LRLWYCALCSVC-----SMSVLRAYENASPLLG-----SSWGGLIHLYTATARNSYHLQ 54
                                                                  IDADGKVSGTTKVDCPYSVMEITSVDVGIVAVKGVYSNYYLAMNEKGRVYGSREFTTD-C
                                                                                                                                 LLLWVSCLSVTCHDLARDMLSPEVANSSVPVVGRQVRSYKHLEGDVRLRRLLCVTNYFLK 80
                                                                                                IHKNGHVDGAPH-QTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENC 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 21, Created)
(TrEMBLrel. 21, Last sequence update)
(TrEMBLrel. 21, Last annotation update)
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                                                                                                                                                                                                 10.5%; Score 143; DB 13; 27.5%; Pred. No. 7.6e-06; tive 25; Mismatches 79;
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Pred. No. 7.3e-06;
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-KOROMÉVALNGKGTÉKRGOKTKÉKN 185
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, Noji S.;
the outgrowth
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Search completed: May 23, 2003, 07:45:45 Job time : 86 secs

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                             preferentially expressed brain.";
                                             MEDLINE=20490027; PubMed=11032749; Yamashita T., Yoshioka M., Itoh N.; "Identification of a novel fibroblast
                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
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                                             growth factor,
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(FGF-23)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                     thalamic
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                 Euteleostomi
                                              FGF-23
                                                                                                      Murinae;
                                    nucleus of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      251;
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                                                                                                       Mus.
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GN F
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Best Local S
Matches 177
                                                                                                                                     FGFL MOUSE
Q9JJN1;
16-OCT-2001
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SEQUENCE
                                                                                                                                                                                                         MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Growth
SIGNAL
                                                                   Fibroblast
                                                                                           16-OCT-2001
16-OCT-2001
  Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isb-
                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00247; HBG
Growth factor; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00442; FGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00262; IL1HBGF.
ProDom; PD000831; HB/F_growthfact; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MGD; MGI:1891427; Fgf23.
InterPro; IPR002209; HB/F growthfact.
InterPro; IPR002348; IL1_HBGF.
Pfam; PF00167; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF263536;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AB037889; BAB13478.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=20517346; PubMed=11062477;
White K.E., Evans W.E., O'Riordan J.L.H.,
Lorenz-Depiereux B., Grabowski M., Meiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=BALB/c; TISSUE=Embryo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mutations in FGF23."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Autosomal
                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                         181
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MLGARLRLWYCALCSYCSMSVLRAYPNASPLLGSSWGGLIHLYTATARNSYHLQIHKNGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    s SWISS-PROT entry is copyright. It is produ
ween the Swiss Institute of Bioinformatics
European Bioinformatics Institute. There a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genet. 26:345-348(2000).

SUBCELLULAR LOCATION: Secreted (Potential).

TISSUB SPECIFICITY: MAINLY EXPRESSED IN THE BRAICH LOW LEVELS. IN BRAIN; PREFERENTIALLY EXPRESSED VENTROLATERAL THALAMIC NUCLEUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
                                                                                                                                                                                                                                                                                                  ADRCRPFPRFV
                                                                                                                                                                                                                                                                                                                                   PEGCRPFAKFI 251
                                                                                                                                                                                                                                                                                                                                                                                                                ABDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNEIPLIHFNTPIPRRHTRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VDGTPHQTIYSALMITSEDAGSVVITGAMTRRFLCMDLHGNIFGSLHFSPENCKFRQWTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AEDPPERDPLNVLKPRPRATPVPVSCSRELPSAEEGGPAASDP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGYDVYLSQKHHYLVSLGRAKRIFQÞGTNÞÞFFSQFLARRNEVÞLLHFYTVRÞRRHTRS
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177; Conserv
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                                                                 growth
  Metazoa;
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251 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , Evans W.E., O'Riordan J.L.H., Speer M.C., Econsiereux B., Grabowski M., Meitinger T., Strom T.M. dominant hypophosphataemic rickets is associated
                                                               (Rel. 40, Created)
(Rel. 40, Last sequence update)
(Rel. 40, Last amnotation updat
growth factor-21 precursor (FGF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                         (Mouse)
                                                                                                                                                                                  STANDARD;
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                                                                                                                                                                                                                                                                                                251
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27757
  Chordata;
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70.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 961; DB 1;
Pred. No. 5.7e-80;
5; Mismatches 49
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FIBROBLAST
Craniata; Vertebrata;
                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110C1F2C735DC360
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                                                                   update)
(FGF-21)
                                                                                                                                                                                  210
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SED IN
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                                                                                                                                                                                                                                                                                                                                                                                    LGVLRRGRGDARGGAGG
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cions on its
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RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                         Query Match
Best Local S
Matches 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAYASHIZAKI Y.;

"Functional annotation of a full-length mouse cDNA collection.";

Nature 409:685-690 (2001).

-I- SUBCELLULAR LOCATION: Secreted (Potential).

-I- TISSUE SPECIFICITY: MOST ABUNDANTLY EXPRESSED IN THE LIVER,

EXPRESSED IN THE THYMUS AT LOWER LEVELS.

EXPRESSED IN THE THYMUS AT LOWER LEVELS.
                                                                                                                                                                                                                                                                                                                                                                       HSSP; P3968; IBAR.
MGD; MGI:1861377; Fgf21.
InterPro; IPR002209; HB/F growthfact.
InterPro; IPR002348; III HBGF.
Pfam; PF00167; FGF; IRACE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. There are no rest
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entities requires a license agreement (See http://www.isb-
or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entre European Bioinformatics Institute. There are no restructed the European Bioinformatics Institute.
                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                       PRINTS; PR00262; IL1HBGF.
ProDom; PD000831; HB/F growthfact;
SMART; SM00442; FGF; 1.
                                                                                                                                                                                                                                                                                          Growen
                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=20461777; PubMed=10858549;
Nishimura T., Nakatake Y., Konishi M., Itoh N.;
"Identification of a novel FGF, FGF-21, preferentially expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=21085660;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J;
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NCBI_TaxID=10090;
           69
                                  60 HVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQT 115
                                                                                  1
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TVVGAAHRSPESILELKALKPGVIQILGVKASRFLCQQPDGALYGSPHFDPEACSFRELL 128
                                                                                                             LRIWVCALCSVCSMSVLRAY---PNASPLIGSSWGGLI----HLYTATARNS-YHLQIHKNG
                                                                           LGLWVRLLLAVFLLGVYQAYPIPDSSPLL--QFGGQVRQRYLYTDDDQDTEAHLEIREDG
                                                                                                                                                                                                                                                                                     3; PS00247; HBGF_FGF; FALSE_NEG.
factor; Signal.
                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Biophys. Acta 1492:203-206(2000).
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                                                                                                                                                                                                                               29
210 AA;
                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BAA99416.1; -.
BAB25115.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Pancreas; pubMed=11217851;
                                                                                                                                                                                                                               210 F
23237 MW;
                                                                                                                                                                                                                                                                       28
                                                                                                                                                                         17.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                        38;
                                                                                                                                                                       Score 241; DB 1;
Pred. No. 7.9e-15;
                                                                                                                                                                                                                             FIBROBLAST GROWTH FACTOR-21
; AE02AABA6477E6F0 CRC64;
                                                                                                                                                                                                                                                                   POTENTIAL
                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                      Length 210
                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
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                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                    SIGNAL
CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                             PRINTS; PR00262; IL1HBGF.

ProDom; PD000831; HB/F growthfact; 1.

SMART; SM00442; FGF; 1.

PROSITE; PS00247; HBGF FGF; FALSE_NEG.

Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HUMAN
FGFL_I
                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR002209; HB/F growthfact.
InterPro; IPR002348; IL1_HBGF.
Pfam; PP00167; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biochim. Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE=20461777; PubMed=10858549;
Nishimura T., Nakatake Y., Konishi M., Identification of a novel FGF, FGF-21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fibroblast growth factor-21 precursor (FGF-21).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9NSA1;
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                     Jenew; HGNC:3678; FGF21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-OCT-2001 (Rel. 40, 16-OCT-2001 (Rel. 40, 16-OCT-2001 (Rel. 40,
                                130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
165 PLIHFNTPIPRRHTRSAEDDSERDPLNVLKPRARMTPAPAS
                                                          122 NGYDYYHSPQYHFLVSL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               179
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                                                                                                                                                                          8 LWVCALCSVCSMSVLRAY--PNASPLIGSSWGGLI---HLYTATARNS-YHLQIHKNGHV
                                                                                                            DGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTLE 121
                                                                                  GGAADQSPESILQLKALKPGVIQILGVKTSRFLCQRPDGALYGSLHFDPEACSFRELLLE
                                                                                                                                            LWVSVLAGLL-LGACQAHPIPDSSPLL--QFGGQVRQRYLYTDDAQQTEAHLEIREDGTV
                             DGYNVYQSEAHGLPLHLPGNKSPHRDPAPRGPARFLPLPGLPPALPEPP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AB021975; BAA99415.1;
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                                                                                                                                                                                                             68;
                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                    29
209 AA;
                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1BAR.
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LOCATION: Secreted (Potent
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22300 MW;
                                                                                                                                                                                                                           16.4%;
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                                                                                                                                                                                                          36;
                                                                                                                                                                                                        Score 222.5; DB 1;
Pred. No. 3.7e-13;
6; Mismatches 70;
                                                                                                                                                                                                                                                                  FIBROBLAST GROWTH FACTOR-21; 27925C52A0023823 CRC64;
                                                                                                                                                                                                                                                                                                 POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
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                                                       GRAKRAFLPGMNP----PPYSQFLSRRNEI 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Potential).
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RESULT 5
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 Query Match
Best Local S
Matches 67
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095750;
                                                                                                                                                                                                    EMBL; AB018122; BAA75500.1; -. EMBL; AF110400; AAD45973.1; -.
                                                                                                                                                                                                                                    entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. Thuse by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Foster J., Brush Gurney A.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xie M.-H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nishimura T., Utsunomiya Y., Hoshikawa M., "Structure and expression of a novel human the fetal brain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                            SEQUENCE
                                                                  SIGNAL
                                                                        PROSITE; PS00247; HBGF_FGF; 1. Growth factor; Signal.
                                                                                               SMART;
                                                                                                                             InterPro; IPR002348; Pfam; PF00167; FGF; 1
                                                                                                                                                             MIM; 603891;
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                                                                                                                                                                                  HSSP; P09038; 1BFG
                                                                                                                                                                                                                                                          modified and this statement
                                                                                                                                                                                                                                                                                          between
                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright.
                                                                                                                                                                                                                                                                                                                                                                             Submitted (DEC-2001)
                                                                                                                                                                                                                                                                                                                                                                                       Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (DEC-1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                             FGFR4."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                       ProDom;
                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Colon
                                                                                                                                                                                                                                                                                                                                                                                                                                                    "FGF-19, a novel fibroblast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=99132028; PubMed=9931477;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-OCT-2001 (Rel.
16-OCT-2001 (Rel.
16-OCT-2001 (Rel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  179 ---GILAPQP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         broblast growth
                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: EXPRESSED C
                                                                                                                                                                                                                                                                                                                                                  FUNCTION: MAY BE INVOLVED IN ERAIN DEVELOPMENT DURING EMBRYOGENESIS.
                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
                                                                                                                                                                                          AF110400; AAD45973.1;
BC017664; AAH17664.1;
                                                                                             ; PR00262; IL1HBGF;
; PD000831; HB/F_g1
SM00442; FGF; 1.
  67; Conserv
                                                                                                                                                                      HGNC:3675; FGF19.
                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Biophys. Acta 1444:148-151(1999).
                                                                                                                                      IPR002209; HB/F_growthfact.
IPR002348; IL1_HBGF.
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                                         216
  Conservative
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                                         ΑA,
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Guí
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                                         24002 MW;
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Last annotation updat
tor-19 precursor (FGF-
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u Q., I
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Score 207; DB 1;
Pred. No. 9.9e-12;
1; Mismatches 91
                                        POTENTIAL.
FIBROBLAST GROWTH FACTOR-19.
E0BCBC9C220F9832 CRC64;
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Hillan K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update) (FGF-19).
                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                                                                                  as its content
 91;
                                                                                                                                                                                                                                                        Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  209
                                                                                                                                                                                                                                                                                                                                                                                                                                                  unique specificity
                  Length 216;
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Indels
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44;
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tions on its
Gaps
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       HSSP; P09038; 1BFG.
MGD; MGI:95517; Fgf3.
TnterPro; IPR002209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOUSE
FGF3_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                              "Multiple RNAs expressed fro carcinoma cell lines encode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=86247582; PubMed=3013624; Moore R., Casey G., Brookes S., Dixon M., "Sequence, topography and protein coding putative oncogene activated by mouse mamm EMBO J. 5:919-924(1986).
                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it
                                                                                                                                                                                                                                                                                MEDLINE-91193291; PubMed-1964688;
Dickson C., Acland P., Smith R., Dixon M., Deed R., McAllan Malther W., Fuller-Pace F., Kiefer P., Peters G.;
"Characterization of int-2: a member of the fibroblast growt
                                                                                                                                                                                                                                                                                                                                                                                growth factors.",
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-73 FROM N.A. MEDLINE=88296404; PubMed=2841106; Smith R., Peters G., Dickson C.;
                                                    EMBL; Y00848; CAA68767.1; PIR; A23930; TVMST2.
                                                                                             or send an email to license@isb-sib.ch).
                                                                                                              entities
                                                                                                                            modified
                                                                                                                                                                                                           -!- SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
                                                                                                                                                                                                                    family.";

J. Cell Sci. Suppl. 13:87-96(1990).

-i- FUNCTION: COULD BE INVOLVED IN EAR DEVELOPMENT.

-i- INDUCTION: BY INTEGRATION OF MOUSE MAMMARY TUMO.
                                                                                                                                                                                                                                                                                                                                          CHARACTERIZATION.
                                                                                                                                                                                                                                                                                                                                                                    EMBO J. 7:1013-1022(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FGF3 OR FGF-3 OR INT-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INT-2 proto-oncogene protein precursor
(FGF-3) (HBGF-3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1988
15-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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                                                                                                           requires a license agreement
                                                                                                                         non-profit institutions as long and this statement is not removed.
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(Rel. 09, Last sequence up)
(Rel. 41, Last annotation)
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                                                                                                                                      institutions as long
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ode a protein with ho
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Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mouse mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dixon M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
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Murinae; Mus.
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                                                                                                                                                                              collaboration
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IPR002348;

HB/F

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RESULT
FGF3_HU
    DESCRIPTION OF THE PROPERTY OF
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Best Local
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Probom; PD00083; FHB/F growthfact; 1.

SMART; SM00442; FGF; 1.

PROSITE; PS00247; HBGF FGF; 1.

Proto-oncogene; Growth factor; Mitogen; Signal; Glycoprotein.

SIGNAL 1 17 POTENTIAL.
                                                                                                                   EMBL; X14445; C. PIR; S04742; S04742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMAN
                                                                                                                                                                                                   modified and this statement is not removentities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brooks S., Smith R., Casey G., Dicks "Sequence organization of the human teratocarcinoma cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. TISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1989
01-OCT-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P11487;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Oncogene 4:429-436(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=89239468; PubMed=2470007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FGF3 OR INT2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INT-2 proto-oncogene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-JUN-2002
InterPro; IPR002209; HB/F_growthfact
InterPro; IPR002348; IL1_HBGF.
Pfam; PF00167; FGF; 1.
                                                                    MIM; 164950; -
                                                                                            Genew;
                                                                                                                 HSSP; P31371;
                                                                                                                                                                                                                                                                                                                                                                                  -1- FUNCTION: COULD BE INVOLVED IN EAR DEVELOPMENT.
-1- SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00167; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           212 -- RÓKKOSPGDHGKM--ETLSTRATPSTQLHTGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGG 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RPRRGFKTRRTQKSSLF----LPRVLGHKDHEMVRLLQSSQPRAPGEGSQPRQR-----
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                                                                                                                                                           X14445; CAA32615.1;
                                                                                       HGNC:3681; FGF3.
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27214 MW;
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Primates;
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Pred. No. 1.9e
26; Mismatches
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INT-2 PROTO-ONCOGENE PROTEIN
N-LINKED (GLCNAC...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata;
Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dickson C.,
human int-2 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70D94FD6A7837C79 CRC64;
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                                                                                                                                                                                                                             (See
                                                                                                                                                                                                                                                                 There are no restrictions ng as its content is in
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                                                                                                                                                                                                                         . Usage by and for http://www.isb-sib.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   expression
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             factor-3)
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                                                                                                                                                                                                                                                                                                                                                                                         FAMILY.
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Best Local S
Matches 52
                      EMBL; Z25539; CAA80987.1; -
EMBL; X65237; CAA46341.1; -
PIR; S39582; S39582.
PIR; S25713; S25713.
HSSP; P31371; 1G82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-1994 (Rel.
01-JUN-1994 (Rel.
01-NOV-1997 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FGF3_XI
P36386,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
SEQUENCE
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SMART; SM00442; FGF; 1.

PROSITE; PS00247; HBGF FGF; 1.

Proto-oncogene; Growth factor; Mitogen; Signal; Glycoprotein.

SIGNAL 1 17

POTENTIAL.
                                                                                                    the European Bioinformatics Institute. The use by non-profit institutions as not removed modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FGF3.
                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                            MEDLINE=93048831; PubMed=1425349;
Tannahill D., Isaacs H.V., Close M.J., Peters G., Sl
"Developmental expression of the Xenopus int-2 (FGF-
activation by mesodermal and neural induction.";
Development 115:695-702(1992).
-i- FUNCTION: POTENT MITOGEN AND TRANSFORMING AGENT.
                                                                                                                                                                                                                                                                                                             SEQUENCE OF 39-137 FROM N.A. TISSUE=Neurula;
                                                                                                                                                                                                                                                                                                                                                    Kiefer P., Mathieu M., Close "FGF3 from Xenopus laevis."; EMBO J. 12:4159-4168(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=94038898; PubMed=8223431;
                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xenopodinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xenopus laevis (African clawed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fibroblast growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN
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                                                                                                                                                                                                                 SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
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239 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                Xenopus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CEFVERIHELGYNTYASRLYRTVSSTPGARRQPSAERLWYVSVNGKGRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29, Last
35, Last
factor-3
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26886 MW;
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precursor (FGF-3)
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                                                                                                                                                                                                                                                                                                                                                                              J.M.,
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INT-2 PROTO-ONCOGENE PROTI
N-LINKED (GLCNAC. .) (PR
, 8DBEF17D2B2E3C63 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 180.5; DB 1
Pred. No. 2.8e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        frog).
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                                                                                                                   (See http://www.isb-sib.
                                                                                                                                           There are no restrictions ng as its content is in
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pipoidea;
                                                                                                                                   Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HBGF-3) (INT-2)
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                                                                                                                                                                                                                                                                                                                                                                                Dickson
                                                                                                                                                                                                                                                                   3., Slack J.M.W.;
(FGF-3) gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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; Pipidae;
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InterPro;

IPR002209; IPR002348;

HB/F\_growthfact. IL1\_HBGF.

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RESULT 9
FGF5_RAT
    PIN TRANSPORTED TO THE PROPERTY OF THE PROPERT
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Best Local S
Matches 55
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P48807; Q634
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CARBOHYD
SEQUENCE
PROSITE; PS00247; HBGF FGF; 1.
Proto-oncogene; Growth factor; Mitogen; SIGNAL 1 17 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochim. Biophys. Acta 1306:31-33(1996).

-i- ALTERNATIVE PRODUCTS: 2 ISOFORMS, LONG FORM (SHOWN HERE) AND A SHORT FORM/FEGF-5S; ARE PRODUCED BY ALTERNATIVE SPLICING.

-i- SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=96201703; PubMed=8611621;
Hattori Y., Yamasaki M., Itoh N.;
"The rat FGF-5 mRNA variant gener
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1996 (Rel.
01-FEB-1996 (Rel.
15-JUN-2002 (Rel.
                                                                  Pfam; PF00167, FGF; 1.
PRINTS; PR00262; ILLHBGF.
ProDom; PD00083; HB/F growthfact;
SMART; SM00442; FGF; 1.
                                                                                                                                                                                                                                                                                              or send
                                                                                                                                                                                                                                                                                                                   entities
                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long as modified and this statement is not removed. U
                                                                                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-Wistar;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fibroblast growth factor-5 FGF5 OR FGF-5.
                                                                                                                                                     InterPro; IPR002348; IL1_HBGF.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         novel truncated form of FGF-5.";
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                                                                                                                                                                                                       D64086; BAA10967.1; -. P09038; IBFG.
                                                                                                                                                                                                                                              D64085; BAA10966.1; -.
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                                                                                                                                                                                                                                                                                     s requires a license agreement (San email to license@isb-sib.ch).
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26984 MW;
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Last annotation update)
tor-5 precursor (FGF-5)
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Pred. No. 4.3e
26; Mismatches
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N-LINKED (GLCNAC. . .).
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Sciurognathi; Muridae;
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                    Signal;
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                    Alternative splicing
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FGF5_MOUSE
ID FGF5_MOUSE
AC P15656; 0888:
DT 01-APR-1990
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DOMAIN
CARBOHYD
VARSPLIC
VARSPLIC
                                        between
                                                      This
                                                                                                                                                                                  SEQUENCE FROM N.A. (S
                                                                                                                                                                                                            "Expression of the murine fibroblast growth factor adult central nervous system."; and the central nervous system."; are contral nervous system."; and the central nervous systems."; and the central nervous systems."; and the central nervous systems.
                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. (LONG ISOFORM).

MEDLINE=90201563; PubMed=2318343;

Hebert J.M., Basilico C., Goldfarb M., Haub O., Martin G.R.;

"Isolation of cDNAs encoding four mouse FGF family members au

Characterization of their expression patterns during embryog

Dev. Biol. 138:454-463(1990).
                                                                          Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND A SHORT FORM/FGF-5S; ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fibroblast growth FGF5 OR FGF-5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-APR-1990 (Rel. 14, Last
15-JUN-2002 (Rel. 41, Last
Fibroblast growth factor-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                             translates into a
                                                                                                                                                           "An alternatively-spliced FGF-5 mRNA
                                                                                                                                                                                                                                                                              MEDLINE=91045929; PubMed=1700424;
                                                                                                                                                                                                                                                                                            STRAIN=C57BL/
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                                                                                                                                  activity.";
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                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. (LONG ISOFORM)
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             European Bioinformatics Institute. The by non-profit institutions as long
                                                     SWISS-PROT
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266
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                                        Swiss
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                      entry is copyright. It is produ
iss Institute of Bioinformatics
                                                                                                                                            partial agonist/antagonist
                                                                                                                                                                                (SHORT ISOFORM).
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121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           precursor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence
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Pred. No. 7.
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
 not
                                                                                                                                                                                  Tomooka Y.,
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-> QIYR (IN SHORT ISOFORM)
ING (IN SHORT ISOFORM).
removed.
                                                  It is produced through a collaboration
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(FGF-5)
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                        There are no
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Usage
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             its content
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RESULT 11
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P12034; 075846;
01-OCT-1989 (Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
VARSPLIC
VARSPLIC
SEQUENCE
                           MEDLINE-91045929; PubMed=1700424; Haub O., Drucker B., Goldfarb M.; "Expression of the murine fibroblast adult central nervous system.";
                                                                                                        Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Ve
Mammalia; Eutheria; Primates; Catarrhini;
                                                                                                                                                      16-OCT-2001 (Rel.
15-JUN-2002 (Rel.
Fibroblast growth
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL;
                                                                     FISSUE=Brain stem;
                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIGNAL 1
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                                                                                                  NCBI_TaxID=9606;
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InterPro; IPR002348; IL1_HBGF.
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B37360;
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; M37823; AAB02660.1;
; M37821; AAB02660.1;
; M37822; AAB02660.1;
                                                                                                                                                                                                                                                                               EDDSERDPLNVLKP--RARMTPAP
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; PD000831; HB/F_growthfact;
SM00442; FGF; 1.
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an email to
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53
108
118
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AAB02660.1; JOINED.
AAB02659.1; ALT_SEQ.
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                                                                                                                                                                                                       STANDARD;
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108
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(LONG ISOFORM)
                                                                                (LONG ISOFORM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           license agreement (See http://www.isb-sib.ch/announce/license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                     12.6%;
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                   U.S.A. 87:8022-8026(1990)
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                                                                                                                                                                                                                                                                                                                                                                                                                            35;
                                                                                                                                                    annotation update)
precursor (FGF-5)
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FIBROBLAST GROWTH F
POLY-SER.
N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
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ILEI -> QIYG (IN SHORT ISOFORM)
MISSING (IN SHORT ISOFORM).
                                                                                                                                                                                                                                                           254
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                                                                                                                                                                                                                                                                                                                                                                                                                                      171;
No. 2.
                                      growth
                                                                                                                                                                                                       268
                                                                                                                      Vertebrata; Euteleostomi;
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.3e-08;
                                       factor
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SVCSMSVLRAYPNASPLLGSSWGGL---IHLYTATARNS

YHLQIHKNGHV 61

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Query Match
Best Local S
Matches 56
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EMBL; M23536; AAB60699.1; -.
EMBL; M23534; AAB60699.1; JOINED.
EMBL; M23535; AAB60699.1; JOINED.
EMBL; M23534; AAB60699.1; ALT_SEQ.
EMBL; M23534; AAB60698.1; ALT_SEQ.
EMBL; AB016517; BAA33738.1; -.
EMBL; AB016517; BAA33738.1; -.
EMBL; AB1194; TUHUF5.
                                                           CARBOHYD
VARSPLIC
VARSPLIC
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                         PRINTS; PR00262; IL1HBGF.
ProDom; PD000831; HB/F_growthfact;
SMART; SM00442; FGF; 1.
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InterPro; IPR002348; IL1_HBGF.
Pfam; PF00167; FGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         de Vries C.J.M.
ten Cate J.W.,
                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                             PROSITE; PS00247; HBGF_FGF; 1.
Proto-oncogene; Growth factor;
                                                                                                                                                                                                                                                                                                                                     MIM; 165190;
                                                                                                                                                                                                                                                                                                                                               HSSP; P09038; 1BFG.
Genew; HGNC:3683; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               expression in activated human smooth in atherosclerotic lesions of smags,
                                                                                                                                                   DOMAIN
                                                                                                                                                                    DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 activation-specific genes."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=20379035; PubMed=10823842;
de Vries C.J.M., van Achterberg T.A.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "An alternatively-spliced FGF-5 mRNA is abunc
translates into a partial agonist/antagonist
activity":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhan X., Bates B., Hu X., Goldfarb
"The human FGF-5 oncogene encodes
fibroblast growth factors.",
Mol. Cell. Biol. 8:3487-3495(1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ozawa K.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND A SHORT FORM/FGF-5S; ARE PRODUCED BY ALTERNATIVE SPLICING. SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: THIS ONCOGENE IS EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSFORM NIH 3T3 CELLS.
                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                non-profit
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    email to license@isb-sib.ch)
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uki S., Asada M., Tomooka Y.,
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29.8%;
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            Score
Pred.
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                                                                       VLEI -> QVHR (IN SHORT ISOFORM)
R -> I (IN REF. 1)
PSGR -> LGA (IN REF. 2).
                                                                                                                                                                 FIBROBLAST POLY-SER.
                                                                                                                                                   POLY-SER.
                                                                                                                                                                                               POTENTIAL
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Mismatches
             168.5; DB
No. 4e-08;
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e cells. Local expr
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74;
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                                                           CRC64;
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FGF-5
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Indels
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01-FEB-1996
                                                                                                                                                                                                                                               CARBOHYD
SEQUENCE
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MEDLINE-95309122; PubMed-7789270;
Mahmood R., Kiefer P., Guthrie S., Dickson C., Mason I.;
"Multiple roles for FGF-3 during cranial neural development
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Development 121:1399-1410(1995).
-i- FUNCTION: POTENT MITOGEN AND TRANSFORMING AGENT (BY SIMILARITY).
-i- SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                   PROSITE; PS00247; HBGF_FGF; 1.
Growth factor; Mitogen; Signal; Glycoprotein.
SIGNAL 1 19 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                  SMART;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute. The use by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chicken.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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InterPro; IPR002348; IL1_HBGF.
Pfam; PF00167; FGF; 1.
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NGHVDGA-PHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQ 116
                                             LVIWLLLLALLPEPRVPAATASPRAPRDAGGRGGVYEHLGGAPRRKLYCATKYHLQIHP 61
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; PD000831; HB/F_growthfact;
SM00442; FGF; 1.
                                                                                                                                                                         Similarity
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25050 MW;
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Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                      12.3%;
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                                                                                                                                                                                                                                   POTENTIAL.

POTENTIAL.

FIBROBLAST GROWTH FACTOR-3.

N-LINKED (GLCNAC. ..) (POT.

B15D41D1E551C5D5 CRC64;
                                                                                                                                          Score 167; DB 1;
Pred. No. 4.3e-08;
8; Mismatches 70
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        B S E
                                                                                     RESULT 14
FGFB_XENLA
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Best Local (
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FGFB_XENLA
P48806;
01-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNAL
CHAIN
SEQUENCE
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01-FEB-1996 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Fibroblast growth factor-3 precursor (FGF-3)
FGF3 OR FGF-3.
Brachward-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-96204005; PubMed-8622866;
Kiefer P., Strahle U., Mason I., Dickson C.;
"Secretion and mitogenic activity of zebrafish FGF3 reveal
intermediate properties relative to mouse and Xenopus homologues.";
Oncogene 12:1503-1511(1996).
-I- FUNCTION: POTENT MITOGEN AND TRANSFORMING AGENT (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Growth factor; Mitogen; Signal; Glycoprotein.
SIGNAL 1 18 POTENTIAL.
CHAIN 19 256 FIBROBLAST GROWT
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ZFIN; ZDB-GENE-980526-178; fg:
InterPro; IPR002209; HB/F grov
InterPro; IPR002348; IL1_HBGF
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NCBI TaxID=7955;
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ProDom; PD000831; HB/F_growthfact; 1.
SMART; SM00442; FGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
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FIBROBLAST GROWTH FACTOR-3.
FIBROBLAST GROWTH FACTOR-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 159.5;
Pred. No. 2.9
                                                           PRT;
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?.5e-07;
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(Rel. 33, Created

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RESULT 15
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Best Local Similarity
                                     Bukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; M
                                                                   01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fibroblast growth factor-4-I precursor (FGF-4
fibroblast growth factor I) (XBFGF-I).
Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00247; HBGF FGF; 1. Growth factor; Mitogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00167; FGF; 1.
PRINTS; PR00262; II1HBGF.
ProDom; PD000831; HB/F_growthfact;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EW the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

MEDLINE=92315916; PubMed=1618138;

ISBAGGS H.V., Tannahill D., Slack J.M.W.;

"Expression of a novel FGF in the Xenopus embryo. A new candidate inducing factor for mesoderm formation and anteroposterior
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
           NCBI_TaxID=8355;
                                                                                                                                                               FGFA XENLA
P48805;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X62594; CAA44480.1; -. HSSP; P31371; 1G82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fibroblast growth factor-4-II precursor (FGF-4-II) (HBGF-4-II) (Embryonic fibroblast growth factor II) (XEFGF-II).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-1996 (Rel.
16-OCT-2001 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR002209; HB/F_growthfact.
InterPro; IPR002348; IL1_HBGF.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             specification.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                            139
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                                                                                                                                                                                                                                                                                                                                                                                            Local
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SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
                                                                                                                                                                                                                                                       EECKFKETLLPNNYNAYESRKYPGMYIALGKNGR 172
                                                                                                                                                                                                                                                                                    ENCREQHOTLENGYDVYHSPQY-HFLVSLGRAKR 143
                                                                                                                                                                                                                                                                                                                                           YHLQIHXNGHVDGAPHQTIYSALMIRSEDAGFYVITGVMSRRYLCMDFRGNIFGSHYFDP 110
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                                                                                                                                                                             STANDARD;
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40, Last annotation update)
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Pred. No. 4
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FIBROBLAST GROWTH FACTOR-4-II.
; 2B01B0BB8824E3B3 CRC64;
                                                    Craniata; Vertebrata;
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                                                                                                                                                                                                                                                                                                                                                                                          , DB 1;
4.4e-07;
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                                                                                                 (FGF-4-I)
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                                       Pipoidea;
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                                                     Euteleostomi;
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Best Local Similarity
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GROWTH factor; Mitogen; Signal
SIGNAL 2 187
CHAIN 23 187
SEQUENCE 187 AA; 21223 MW;
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ProDom; PD000831; HB/F_growthfact;
SMART; SM00442; FGF; 1.
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InterPro; IPR002348; IL1_HBGF.
Pfam; PF00167; FGF; 1.
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Development 114:711-720(1992)
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   134
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Isaacs H.V., Tannahill D., Slack J.M.W.;
Expression of a novel FGF in the Xenopus embryo. A new candidate
                                                                                                                                        75
                                                                                                                                                                                             51 YHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDP 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: GOOD CANDIDATE FOR AN INDUCING FACTOR WITH POSSIBLE ROLES BOTH IN MESOBERM INDUCTION AT THE BLASTULA STAGE AND IN THE FORMATION OF THE ANTEROPOSTERIOR AXIS AT THE GASTRULA STAGE. SUBCELLULAR LOCATION: Secreted (Probable).

SIMILARITY: BELONGS TO THE HEPARIN-BINDING GROWTH FACTORS FAMILY.
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                                                                                                                                 FHIOVLPDGRINGMHSENRYSLLELSPVEVGVVSLYGVKSGMFVAMNAKGKLYGSRYFN- 133
EECKFKETLLPNNYNAYESRKYPGMYIALGKNGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                               ENCREQUOTLENGYDVYHSPQY-HFLVSLGRAKR
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31.9%;
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Pred. No. 9.8e-07
4; Mismatches 3
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FIBROBLAST GROWTH FACTOR-4-I.
AAE63D65E82AD1BD CRC64;
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167
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                                                                                                                                                                                                                                                                                                                                  Length 187;
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             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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A;Gene: fgf-23 C;Keywords: nu

nucleus

C; Genetics:

C; Comment: This factor, a secreted

protein, acts on proximal cells and plays roles

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## ALIGNMENTS

RESULT 1 JC7513

R;Yamashita, T.; Yoshioka, M.; Itoh, N.
Biochem. Biophys. Res. Commun. 277, 494-498, 2000
A;Title: Identification of a novel fibroblast growth fact A;Reference number: JC7513; MUID:20490027; PMID:11032749
A;Contents: Embryo

factor,

FGF-23,

preferentially exp

fibroblast growth factor-23 - mouse C;Species: Mus musculus (house mouse) C;Date: 30-Jun-2001 #sequence\_revision 30-Jun-2001 #text\_change 30-Jun-2001 C;Accession: JC7513

A;Accession: JC7513
A;Molecule type: mRNA
A;Residues: 1-251 <YAM>
A;Cross-references: DDBJ:AB037889

transforming protein (int-2) - mouse (;Speciles: Mus musculus (house mouse) (;C;Date: 31-Dec-1989 #sequence\_revision 31-Dec-1989 #text C;Accession: A23930; S08157 R;Moore, R.; Casey, G.; Brookes, S.; Dixon, M.; Peters, RESULT TVMST2 밁 S 밁 S 밁 Ś 밁 Ś 밁 Ś Best Loc Matches Query Match 241 ADRCRPFPRFV 251 241 181 181 121 121 61 61 Local Similarity 70.9 Н MLGARLRIMVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARNSYHLQIHKNGH 60 PEGCRPFAKFI 251 AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG 240 ENGYDYYLSQKHHYLVSLGRAKKIFQPGTNPPPPSQFLARRNEVPLLHFYTVRPRRHTRS VDGTPHQTIYSALMITSEDAGSVVITGAMTRRFLCMDLHGNIFGSLHFSPENCKFRQWTL 120 VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL 120 MLGTCLRLLVGVLCTVCSLGTARAYPDTSPLLGSNWGSLTHLYTATARTSYHLQIHRDGH ENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNEIPLIHFNTPIPRRHTRS 180 AEDPPERDPLNVLKPRPRATPVPVSCSRELPSAEEGGPAASDPLGVLRRGRGDARGGAGG 70.7%; 25; Score 961; DB 2; Pred. No. 5.4e-80; Pred. No. 5.4e-80; 31-Dec-1989 #text\_change 18-Jun-1999 49; Length Indels G.; Dickson, 251; 0; Gaps 180 60 0

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A;Map position: 11q13.3-11q13.3
A;Introns: 74/1; 108/3
C;Superfamily: f:1
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Oncogene 4, 429-436, 1989
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Nature 343, 662-665, 1990

A;Title: Subcellular fate of the Int-2 oncoprotein is determined by number: S08157; MUID:90158795; PMID:2406607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fibroblast growth factor 3 precursor - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:Y00848; GB:M26284; GB:X68450; NID:g52716; PIDN:CAA68767.1; R;Acland, P.; Dixon, M.; Peters, G.; Dickson, C.
                                                                                                                        ;18-239/Product:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;Map position: 7
;Introns: 74/1; 108/3
;Superfamily: fibroblast growth factor
                                                               Query Match
Best Local (
                                                                                                                                                     Superfamily: fibroblast growth factor Keywords: growth factor
                                                                                                                                                                                                                                                    Gene: GDB:FGF3; INT2
                                                                                                                                                                                                                                                                                                                                                            Title: Sequence organization of the human Reference number: S04742; MUID:89239468; I
                                                Matches
                                                                                                                                                                                                                                                                                 Cross-references: EMBL:X14445; NID:g33937; PIDN:CAA32615.1;
                                                                                                                                                                                                                                                                                                        Molecule type: DNA
Residues: 1-239 <BRO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;Molecule type: mRNA
:Residues: 'HSRAGLARGRVLPAPRLRETRAGAAAAAGGRDAGM',3-17
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;Residues: 1-245 <MOO>
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                                                                                                                                                                                                                                                                         Genetics:
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Accession: S04742
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LYTATARNSYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGN 101
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ct: transforming
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31.0%;
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29.4%;
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Pred. No. 4.2e
26; Mismatches
                                                              Score 180.5;
Pred. No. 6.
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(int-2) #status
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ches 75;
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                                      Indels 15;
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fibroblast
C;Species:
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A;Title: The rat FGF-5 mRNA variant generated
A;Reference number: S68144; MUID:96201703; PMJ
                                      A;Status: preliminary; nucleic acid sequence not A;Molecule type: mRNA A;Residues: 1-266 <HATS
                                                                                                A;Reference number: A;Accession: S68144
                                                                                                                                                                                                          C;Date: 06-Dec-1996 #sequence_revision 13-Mar-1997
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                        A;Cross-references:
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A;Tille: Developmental expression of the Xenopus int-2 (FGF-3) A;Reference number: S25713; MUID:93048831; PMID:1425349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Date: 10-Sep-1999 #sequence revision 10-Sep-1999 C;Accession: S39582; S25713
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Species: Xenopus laevis (African
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N; Alternate names: FGF-3 protein; fibroblast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    transforming protein int-2 - African clawed frog
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                                                                                                                                                                                                                                                                                                                                                                                            153
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101 NIFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVS-----LGRAKRAFLPGMNPP--
                                                                                                                                                                                                                                                                                                                                                        182
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P.; Mathieu, M.;
2, 4159-4168, 1993
                                                                                                                                                                                                                                                                                                                                                    PRRGFKTRRTOKSSLFLPRVLDNKDHDAVRLFHTNAVYRES-
                                                                                                                                                                                                                                                                                                                                                                                      PYSOFLSRRNE----IPLIHEN---TPIPRRHTRSAEDDSERDPLNVLKP 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LYCAT---KYHLQIHLNGKINGTLEKNSVFSILEITAVDVGIVAIKGLFSGRYLAMNQRG 122
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                                                                                                                                                                                                                                growth factor 5 - rat
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YSQFLSRRNEIPLIHFNTPIPRRH---TRSAEDDSERDPLNVLKPRAR 198
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fibroblast growth
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                    EMBL: D64085;
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                    NID: g992952; PIDN: BAA10966.1;
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Pred. No. 9.2e-09;
6; Mismatches 63
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                PID:g992953
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J.M.W.
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RESULT
TVHUF5
N;Alternate
C;Species: 1
          fibroblast growth factor 5 - hum N; Alternate names: transforming
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A; Residues: 1-264 < HEB>
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R;Hebert, J.M.; Basilico, C.;
138 454-463, 1990
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A36207
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Best Local S
Matches 57
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ittle: Isolation of cDNAs encoding four mouse FGF family members and Reference number: A37360; MUID:90201563; PMID:2318343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Residues: 1-264 <HAU>
|Residues: 1-264 <HAU>
|Cross-references: GB:M37821; GB:M37822; GB:M37823; NID:g193280;
|Cross-references: GB:M37821; GB:M37822; GB:M37823; NID:g193280;
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                                                                                                                                                                           EKTGREWYVALNKRGKAKRGCSPRVKPQHVSTHFLPRFKQSEQPELSFTVTVP------
                                                                                                                                                                                                            -----PQYHFLVSLGRAKRAFLPGMNPPPYS-QFLSR--RNEIPLIHFNTPIPRRHTRSA 181
                                                                                                                                                                                                                                           I FAVSQGIVGIRGVFSNKFLAMSKKGKLHASAKF-TDDCKFRERFQENSYNTYASAIHRT
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                                                                                                                                                                                                                                                                                                                                            ASPLLGSSWGGLIH---LYTATARNS-----YHLQIHKNGHYDGAPHQTIYSALM 74
                                                                                                                --EKKKPPVKPKVPLSQPRRSPSP
                                                                                                                                              EDDSERDPLNVLKP--RARMTPAP 203
                                                                                                                                                                                                                                                                                                               ASP--GSQGSGSEHSSFQWSPSGRRTGSLYCRVGIGFHLQIYPDGKVNGSHEASVLSILE 120
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28.2%;
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Pred. No. 5.1e-08;
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Pred. No. 1.6e-08;
4; Mismatches 75
                                                                                                              254
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             FGF5
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                                                                                                                                                                                                                                                                                                                                                                                  Development 121, 1399-1410, 1995
A; Title: Multiple roles for FGF-3 during c:
A; Reference number: I50588; MUID:95309122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      fibroblast growth factor 3 - chicken C;Species: Gallus (chicken) C;Date: 13-Sep-196 #sequence_revision 13-Sep-1996 #text_change C;Accession: I50588
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Date: 31-Dec-1989 #sequence_revision 31-Dec-1989 #text_c C;Accession: A31194 R;Zhan, X.; Bates, B.; Hu, X.; Goldfarb, M. Mol. Cell. Biol. 8, 3467-3495, 1988 A;Title: The human FGF-5 oncogene encodes a novel protein A;Reference number: A31194; MUID:89096942; PMID:3211147
                                                                                                                                                                                                                                                                                                   A;Cross-references:
                                                                                                                                                                                                                                                                                                                                                                       A;Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                    R; Mahmood, R.; Kiefer, P.; Guthrie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Map position: 4q21-4q21
C; Superfamily: fibroblast growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I50588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-267 < ZHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GDB:119907; OMIM:165190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: GDB:FGF5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:M23536; GB:M21617; NID:g182539;
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Best Local
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Best Local :
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 121
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                                                                                                                                   2 LVIWLLLLALLPEPRVPAATASPRAPRDAGGRGGVYEHLGGAPRRRKLYCATKYHLQIHP
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                                                                                                                                                                   6 LRLW--VCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATAR-----NSYHLQIHK 57
                                                                                               NGHVDGA-PHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQ 116
 ERIHELGYNTYASRLYRTVPSGASTKR
                                HOTLENGYDVYHSPOYHFLVSLGRAKR
                                                                  GGKINGTLEKNSVFSILEITAVDVGIVAIKGLFSGRYLAMNKRGRLYASENYNTE-
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57; Conserv
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                                                                                                                                                                                                           Conservative
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blast growth
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                                                                                                                                                                                                       12.3%; Score 167; DB 2; 13.3%; Pred. No. 9.3e-08; tive 18; Mismatches 70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -PQYHFLVSLGRAKRAFLPGMNPPPYS-QFLSR--RNEIPLIHF 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27; Mismatches
                                                                                                                                                                                                                                                                             NID:g623215; PIDN:CAA87635.1; PID:g623216 factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 169; DB 1;
Pred. No. 7.9e-08;
                                                                                                                                                                                                                                                                                                                                                   from GB/EMBL/DDBC
                                                                                                                                                                                                                                                                                                                                                                                                                                      S.; Dickson, C.; Mason,
147
                                  143
                                                                                                                                                                                                                                                                                                                                                                                  cranial neural
2; PMID:7789270
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                                                                                                                                                                                                                                           Length 220;
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RESULT

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C;Accession: S54407
R;Isaacs, H.V.; Tannahill, D.; Slack, J.M.W.
Development 114, 711-720, 1992
Development 714, 715-720, 1992
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A;Title: The zebrafish Fgf-3 gene: cDNA sequence, transcript A;Reference number: JC4627; MUID:96194899; PMID:8654946
A;Accession: JC4627
      embryonic fibroblast growth factor - African clawed frog C;Species: Kenopus laevis (African clawed frog) C;Date: 19-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 16-Jul-1999 C;Accession: S23595 R;Isaacs, H.V.; Tannahill, D.; Slack, J.M.W.
                                                                                                              S23595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Title: Expression of a novel FGF in the Xenopus embryo. A;Reference number: S23595; MUID:92315916; PMID:1618138 A;Accession: S54407
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C; Superfamily: fibroblast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Note: The authors translated the codon TGG for residue 178 as His C;Comment: This factor belongs to the fibroblast growth factor family which have otein is a cell signalling molecule and plays the roles during the early stages of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-256 < KIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Date: 10-May-1996 #sequence_revision 19-Jul-1996 #text_change 16-Jul-1999 C;Accession: JC4627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: embryo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fibroblast growth factor 3 - zebra fish
C;Species: Brachydanio rerio (zebra fish)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Molecule type: mRNA; Residues: 1-192 <ISA; Cross-references: EMBL: X62594; Superfamily: fibroblast growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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                                                                                                                                                                                                                                      111 ENCRFOHOTLENGYDVYHSPQY-HFLVSLGRAKR 143
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                                                                                                                                                                                                                                                                                                                  51 YHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFYVITGVMSRRYLCMDERGNIFGSHYFDP 110
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LYCAT---KYHLQIHPNGKIDGSLEENNPLSILEITAVDVGVVAIKGLFSGRYLAMNEKG 122
                                                                                                                                                                                                                                                                                                                                                                      30,
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plast; growth
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Pred. No. 5.5e-07;
3; Mismatches 39
                                                                                                                                                                                                                                                                                                                                                                Score 155; DB 2;
Pred. No. 9.7e-07;
5; Mismatches 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           factor
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$20102

fibroblast growth factor 6 precursor - human

N,Alternate names: fibroblast growth factor-related

C;Species: Homo sapiens (man)

C;Date: 18-Feb-1994 #sequence revision 12-Apr-1996

C;Accession: $20102; $23739; $04204; $36910
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RESULT 12
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A;Title: A positive feedback loop coordinates growth and patterning in the A;Reference number: 150710; MUID:95021713; PMID:7935794
A;Accession: S50858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fibroblast growth factor 4 - chicken C;Species: Gallus gallus (chicken) C;Date: 13-Sep-196 #sequence revision C;Accession: S78506; S50858; T50710
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                                                                                                                                                                                                                                                                                   C; Keywords: growth factor; transforming protein
                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: DNA
A;Residues: 1-136,'Q',137-194,'I' <NIW>
A;Cross-references: EMBL:U14654; NID:g609347;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             submitted to the EMBL Data A: Reference number: $78506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Niswander,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Cross-references: EMBL: X62593; C; Superfamily: fibroblast growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-187 < ISA>
                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Development 114, 711-720, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Accession: S78506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Residues: 1-194 <NIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                     Superfamily: fibroblast growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
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149
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                                                                                                                                                                                                                               Local
LLPNNYNAYESRIYPGMYIALSKNGRTKKGNKVSPTMTVTHFLP
                               TLENGYDVYHS----PQYHFLVSLGRAKRA---
                                                                                                   GHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQ 118
                                                                                                                                                                          GARLRLWVCALC--SVCSMSVLR--AYPNASPLLGSSWGGLIHLYTATARNSYHLQIHKN 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EECKFKETLLPNNYNAYESRKYPGMYIALGKNGR 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENCRFQHQTLENGYDVYHSPQY-HFLVSLGRAKR 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FHIOVLPDGRINGMHSENRYSLLELSPVEVGVVSLYGVKSGMFVAMNAKGKLYGSRYFN- 133
                                                                  GRIDGIHSENRYSLLEISPVERGVVSIFGVRSGLFVAMNSKGKLYGSTHVNDE-CKFKEI
                                                                                                                                        GPRQRRWDAALFARSVARLPAERRDAARDGDYLLG--YKRLRRLY-CNVGIGFHIQVLPD
                                                                                                                                                                                                               51;
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                                                                                                                                                                                                                               Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                 acid sequence
                                                                                                                                                                                                                               10.8%;
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31.9%;
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                                                                                                                                                                                                               22; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NID:g64692;
factor
                                                                                                                                                                                                                               Score 146.5;
Pred. No. 5.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 151; DB 2;
Pred. No. 2.2e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                 shown
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-Sep-1996 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Xenopus embryo.
; PMID:1618138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIDN:CAA44479
                                                                                                                                                                                                                               .9e-06;
                                                                                                                                                                                                                                                                                                                                                         PIDN: AAA58706.1;
                                                                                                                                                                                                                                                    DB
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                               FLP 147
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                                                                                                                                                                                                                                                194;
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                                                                                                                                                                                                                                                                                                                                                       PID:g609348
                                                                                                                                                                                                               23;
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                                                                                                                                        89
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factor-related

protein FGF.6; transforming

#text\_change

21-Jul-2000

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A;Title: Isolation and sequence of the murine Fgf6 cDNA A;Reference number: I49664; MUID:93120244; PMID:1477139 A;Accession: I49665
                                                            A;Note: it is uncertain whether Met-1 or Met-11 is the initiator R;Ollendorff, V.; Rosnet, O.; Marics, I.; Birnbaum, D.; deLapeyr Biochimie 74, 1035-1038, 1992
                                                                                                                                  A;Molecule type: DNA
A;Residues: 1-208 <LAP>
A;Cross-references: EMBL:X51552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Coulier, F.; Batoz, M.; Marics, 1.; we were and role of the signal peptide. Oncogene 6, 1437-1444, 1991
A;Title: Putative estructure of the FGP6 gene product and role of the signal peptide. A;Reference number: $20102; MUID:91360279; PMID:1886714
A;Accession: $20102
A;Accession: $20102
                                                                                                                                                                                                                                               Oncogene 5, 823-831
A; Title: Structure,
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                                                                                                                                                                                                          A; Accession: S14192
                                                                                                                                                                                                                                                                                                                                                                                           fibroblast
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A;Residues: 81-99'G',101-208 <MAR>
A;Cross-references: EMBL:X14071; NID:g31354; PIDN:CAB37648.2; PID:g4467836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Note: it is uncertain whether Met-1 or Met-11 is the initiator R;Marics, I.; Adelaide, J.; Raybaud, F.; Mattei, M.G.; Coulier, Oncogene 4, 335-340, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Introns: 115/3; 150/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Map position: 12p13-12p13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Gene: GDB: FGF6; hst-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Title: Characterization of the HST-related FGF.6 gene, A; Reference number: S04204; MUID:89201880; PMID:2649847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Note: it is uncertain whether Met-1, Met-11 or Met-34 R;Iida, S.; Yoshida, T.; Naito, K.; Sakamoto, H.; Katoh, Oncogene 7, 303-309, 192
A;Title: Human hat-2 (FGF-6) oncogene: cDNA cloning and A;Reference number: S23739; MUID:92195660; PMID:1549352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-208 <COU>
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                                                                                                                                                                                                                                                                                  ;Species: Mus musculus (house mouse)
;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Mar-2000
;Accession: S14192; 149655; 149664
;de Lapeyriere, O.; Rosnet, O.; Benharroch, D.; Raybaud, F.; Marchetto, S.
                                                                                                                                                                                                                             Reference number: S14192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;41-208/Product: fibroblast growth factor 6 #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Superfamily: fibroblast growth factor: 1-40/Domain: (or 11-40 or 34-40) signal sequence #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;Molecule type: mRNA
;Residues: 1-208 <III
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RGVVSLFGVRSALFVAMNSKGRLYATPSFQ-EECKFRETLLPNNYNAYESDLYQGTYIAL 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTLENGYDVYHSPQYH----FL 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGEIAGVNWESGYLVGIKRORRLY-CNVGIGFHLOVLPDGRISGTHEENPYSLLEISTVE 124
                                                                                                                                                                                                                                                                                                                                                                                      growth factor 6 - mouse
                                                                                                                                                                                                                                                                         823-831,
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                                                                                                                                                                                                                          chromosome mapping and S14192; MUID:90295275;
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                                                                                                                                                                                                                                                                       1990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---FLP 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    206
                                                                                                                                                                                                                             expression of PMID:2193291
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, H.; Katoh,
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                                                                                                                                                                                                                                                                                       F.; Marchetto, S.;
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A;Note: The authors translated the codon GGC for residue
C;Comment: This protein is a member of fibroblast growth
                                                                                                                                                                                                     C; Keywords: thymus; transforming protein
                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-206 < YUJ>
                                                                                                                                                                                                                                                                                                                                                                                            A; Title: An unexpected transforming gene in calf-thymus A; Reference number: JC4268; MUID:96032369; PMID:7557455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N;Alternate names: transforming protein hst C;Species: Bos primigenius taurus (cattle)
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                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Yu, J.C.; DeSeabra, A.J.J.; Wang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: JC4268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Introns: 116, C; Superfamily:
                                                                                                                                                                                                                                        A; Introns: 113/3; 145/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    fibroblast growth factor 4 -
                                                                                                                                                                                                                                                            A;Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: Fgf6
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A; Residues: 1-18 < RE2 >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Residues: 19-208 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; translated from GB/EMBL/DDBJA;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Date: 10-Nov-1995 #sequence_revision 08-Feb-1996 #text_change 17-Mar-2000
                                                                                                                                                                                                                   Superfamily: fibroblast growth factor
                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                            Genetics:
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Best Local Similarity
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     154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        184
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                                                                      94
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                                                                                                  YHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDP 110
E-CRFREILLPNNYNAYECDRHPGMFIALSKNGKAKKGNRVSPTMKVTHFLP
                                   ENCREQHQTLENGYDVY ----HSPQYHFLVSLGRAKRA---
                                                                  FHLOVLPDGRIGGVHADTSDGLLELSPVERGVVSIFGVASRFFVAMSSRGRLYGSPFFTD 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SKYGRVKRGSKVSPIMTVTHFLP
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Query Match Best Local Similarity 100.0%; Score 1360; DB 9; Length 251; Matches 251; Conservative 0; Mismatches 0; Indels 0; Gaps  Oy 1 MLGARLRLWVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARNSYHLOIHKNGH 60	RESULT 1  US-09-901-938-2  US-09-901-938-2  JSequence 2, Application US/09901938  Patent No. US20020156001A1  GENERAL INFORMATION:  APPLICANT: ECONS, Michael  APPLICANT: STROM, Tim  APPLICANT: WRITINGER, Thomas  TITLE OF INVENTION: NOVEL FIBROBLAST GROWTH FACTOR (FGF23) AND METHODS FOR FILE REFERENCE: 053884-5001  CURRENT FILING DATE: 2001-07-10  PRIOR APPLICATION NUMBER: US/09/901,938  CURRENT FILING DATE: 2000-07-19  NUMBER OF SEQ ID NOS: 34  SOFTWARE: Patentin version 3.0  SEQ ID NO 2  LENGTH: 251  TYPE: PRT  ORGANISM: Homo sapiens	ALIGNMENTS	20 1360 100.0 251 9 US-09-992-600A-26 Sequence 26, Appl 251 1360 100.0 251 9 US-09-997-666-311 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-666-361 Sequence 511, Appl 251 1360 100.0 251 9 US-10-175-746-266 Sequence 266, Appl 251 1360 100.0 251 9 US-10-176-918-266 Sequence 266, Appl 251 1360 100.0 251 9 US-10-176-918-266 Sequence 266, Appl 251 1360 100.0 251 9 US-10-147-266 Sequence 266, Appl 251 1360 100.0 251 9 US-10-147-266 Sequence 266, Appl 251 1360 100.0 251 9 US-10-147-266 Sequence 266, Appl 251 1360 100.0 251 9 US-10-147-266 Sequence 266, Appl 251 1360 100.0 251 9 US-10-147-311-266 Sequence 266, Appl 251 1360 100.0 251 9 US-10-143-114-266 Sequence 266, Appl 251 1360 100.0 251 9 US-09-999-766-511 Sequence 266, Appl 251 1360 100.0 251 9 US-09-991-157-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-991-157-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-991-157-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-514-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-501-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-501-511 Sequence 511, Appl 251 1360 100.0 251 9 US-09-997-501-511
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PRIOR APPLICATION NUMBER: 60/062250
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PRIOR APPLICATION NUMBER: 60/065186
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TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730PIC20
FILE REFERENCE: P2730PIC20
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CURRENT FILING DATE: 2001-11-14
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                                                                        DR FILING DATE: 1998-06-02

PR APPLICATION NUMBER: 60/087609

DR FILING DATE: 1998-06-02

DR FILING DATE: 1998-06-02

DR APPLICATION NUMBER: 60/087789

DR FILING DATE: 1998-06-03

DR FILING DATE: 1998-06-03
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FILING DATE: 1997-11-24
APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                   FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/087106
                                                                                                                                                                                                                                                                 FILING DATE: 1998-03-20
APPLICATION NUMBER: 60/083322
FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                APPLICATION
FILING DATE
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FILING DATE: 1998-06-04
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APPLICATION NUMBER: 60/087607
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Roy, Margaret Ann
Stewart, Timothy A.
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Godowski, Paul J.
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Gerritsen, Mary E.
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                NUMBER: 60/088025
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TITLE OF INVENTION: Secreted and Transmembrane Polypeptides
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C19
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Kljavin, Ivar J
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                                                                                                                                                                                                                                                                                               Napier, Mary A.
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b. US20020193300A1
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wart, Timothy /
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Pred. No. 2.1e-123;
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APPLICATION FILING DATE:

APPLICATION NUMBER: 60/090694 FILING DATE: 1998-06-25

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APPLICATION NUMBER: 60/090690 APPLICATION NUMBER: 60/090678

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APPLICATION NUMBER: 60/090676

1998-06-24

60/090557

APPLICATION NUMBER: FILING DATE:

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APPLICATION NUMBER: 60/090542

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APPLICATION NUMBER: 60/090540

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APPLICATION NUMBER:

APPLICATION NUMBER: 60/090445 APPLICATION NUMBER: 60/090444 FILING DATE: 1998-06-24

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60/090435

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APPLICATION NUMBER: 60/090349

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FILING DATE: 1998-06-22 APPLICATION NUMBER: 60/090254

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APPLICATION NUMBER: 60/091478

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APPLICATION NUMBER: FILING DATE: 1998-0

APPLICATION FILING DATE:

NUMBER: 60/090862 NUMBER: 60/090696 NUMBER: 60/090695

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60/090863

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FILING DATE:

APPLICATION NUMBER: 60/091544
FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091519
FILING DATE: 1998-07-02

NUMBER: 60/091626: 1998-07-02

60/091633

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APPLICATION NUMBER: 60/075945 FILING DATE: 1998-02-25

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APPLICATION NUMBER: 60/087607

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60/087106

1998-06-02

PRIOR OR APPLICATION NUMBER: 60/090540
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1998-06-02

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APPLICATION NUMBER: 60/087759 APPLICATION NUMBER: 60/087609

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APPLICATION NUMBER: 60/088734

APPLICATION NUMBER: 60/088810 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088824 FILING DATE: 1998-06-10

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APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13

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APPLICANT: Baker, Kevin P.
APPLICANT: Botstein, David
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              INVENTION:
                                      Tumas, Daniel
Watanabe, Colin K.
Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                                           Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
                                                                                              Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                     Grimaldi, J.Christopher Gurney, Austin L. Kljavin, Ivar J.
                                                                                                                                                      Napier, Mary A.
                                                                                                                                                                                                               Godowski, Paul J.
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Pred. No. 2.1e-123;
; Mismatches 0;
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APPLICATION NUMBER: 60/088167 FILING DATE: 1998-06-05

APPLICATION NUMBER: 60/088326

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APPLICATION NUMBER: 60/088030 FILING DATE: 1998-06-04

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                                                    Ferrara, Napoleone
Fong, Sherman
Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J
Grimaldi, J. Christopher
Gurney, Austin L.
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Baker, Kevin P.
Botstein, David
Paoni, Nicholas F.
                         Napier, Mary A.
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NPPLICANT: Zhang, Zemin

ITTLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic

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FILE REFERENCE: P2730P1C14

FILE REFERENCE: P2730P1C14
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Stewart, Timothy A.
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FILING DATE: 1998-06-1
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APPLICATION NUMBER: 60/088824
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APPLICATION 1
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APPLICATION NUMBER: 60/090355
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FILING DATE: 1998-06-25

APPLICATION NUMBER: 6 FILING DATE: 1998-06-APPLICATION NUMBER: 6

60/090676 5-25 60/090678

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GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi J.

APPLICANT: Baker, Kevin P.

APPLICANT: Botstein, David

APPLICANT: Desnoyers, Luc

APPLICANT: Eaton, Dan L.

APPLICANT: Ferrara, Mapoleone

APPLICANT: Fong, Sherman
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Matches 251;
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APPLICATION NUMBER: 60/092182
FILING DATE: 1998-07-09
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APPLICATION NUMBER: 60/091982
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CURRENT APPLICATION NUMBER: US/09/991,181
CURRENT FILING DATE: 2001-11-16
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PRIOR FILING DATE: 1997-11-12
PRIOR APPLICATION NUMBER: 60/065311
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PRIOR FILING DATE: 1997-06-1
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APPLICATION NUMBER: 60/088202
FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/088212
FILING DATE: 1998-06-05
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FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088033
FILING DATE: 1998-06-04
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FILING DATE: 1998-06-04
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FILING DATE: 1998-06-04
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Goddard, Audrey
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Williams, P. Mickey
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Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kljavin, Ivar J.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski,Paul J.
Grimaldi,J.Christopher
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FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088826

OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088858
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/088861
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/088876

FILING DATE: 1998-06-16 APPLICATION NUMBER: 60/089512 FILING DATE: 1998-06-16 APPLICATION NUMBER: 60/089514

FILING DATE: 1998-06-12 APPLICATION NUMBER: 60/089440

APPLICATION NUMBER: 60/089105 FILING DATE: 1998-06-11

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FILING DATE: 1998-06-23 APPLICATION NUMBER: 60/090355

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APPLICATION NUMBER: 60/090431

WS-09-93-687-511 US-09-93-687-511 ; Sequence 511, Application US/09993687 ; Publication No. US20020198149A1

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CURRENT APPLICATION NUMBER: US/09/993,687
CURRENT FILING DATE: 2002-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILLING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
PRIOR APPLICATION NUMBER: 60/065111
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CANT: Ashkenazi, Avi J.
CANT: Baker, Kevin P.
CANT: Botstein, David
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Stewart, Timothy A.
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Grimaldi,J.Christopher
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APPLICATION NUMBER: 60/078910
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APPLICATION NUMBER: 60/088021
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Stewart, Timothy A.
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Gerritsen, Mary E
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Williams, P. Mickey
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Eaton, Dan L.
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APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088824 FILING DATE: 1998-06-10 FILING DATE: 1998-06-10

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DR FILING DATE: 1998-06-05
DR APPLICATION NUMBER: 60/088217

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Gurney, Austin L.
Sherwood, Steven
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Filvaroff, Ellen
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Wood, William
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CURRENT FILING DATE: 1970-10-15
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Stewart, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                         Williams,
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Botstein, David
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Daniel
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P. Mickey
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APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-03

FILING DATE: 1998-06-02 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/

DATE: 1998-05-28

NUMBER:

60/087106

NUMBER: 60/084600 : 1998-05-07

APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/

NUMBER: 60/088025 NUMBER: 60/088021 NUMBER: 60/087827 NUMBER: 60/087759 NUMBER: 60/087609 NUMBER: 60/087607

FILING DATE: 1998-06-04

APPLICATION NUMBER: 60/088026 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088028

FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088030 PILING DATE: 1998-06-04
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R FILING DATE: 1998-06-05
R APPLICATION NUMBER: 60/08
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R APPLICATION NUMBER: 60/08
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R APPLICATION NUMBER: 60/08

FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088167
FILING DATE: 1998-06-05

FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088326 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088033

APPLICATION

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FILING DATE: 1998-00 APPLICATION NUMBER:

APPLICATION NUMBER: 60/088861

1998-06-11

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APPLICATION NUMBER: 60/088824 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088826

APPLICATION NUMBER: 60/088742 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088810 FILING DATE: 1998-06-10

APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-10

60/088738

FILING DATE: 1998-06-09 APPLICATION NUMBER: 60/088734 FILING DATE: 1998-06-10

NUMBER: 60/088655 NUMBER: 60/088217 NUMBER: 60/088212 NUMBER: 60/088202

FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088858
FILING DATE: 1998-06-11

PRIOR PRIOR

OR FILING DATE: 1998-06-16
OR APPLICATION NUMBER: 60/089514
OR FILING DATE: 1998-06-16
OR APPLICATION NUMBER: 60/089532
OR FILING DATE: 1998-06-17
OR APPLICATION NUMBER: 60/089538
OR FILING DATE: 1998-06-17
OR APPLICATION NUMBER: 60/089598
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OR APPLICATION NUMBER: 60/089599
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OR APPLICATION NUMBER: 60/089599
OR FILING DATE: 1998-06-17

DR AFFILAND DATE: 1998-06-12

OR FILING DATE: 1998-06-16

FILING DATE: 1998-06-11
APPLICATION NUMBER: 60/089105
FILING DATE: 1998-06-12

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          CURRENT APPLICATION NUMBER: US/09/993,667
CURRENT FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR APPLICATION NUMBER: 60/062250
PRIOR PRILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
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Matches 251;
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Best Local
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                                                                                                                                            TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Ashkenazi,Avi J.
APPLICANT: Baker,Kevin P.
APPLICANT: Botstein,David
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R FILING DATE: 1998-07-07

OR APPLICATION NUMBER: 60/091982

OR FILING DATE: 1998-07-07

OR APPLICATION NUMBER: 60/092182

OR FILING DATE: 1998-07-09
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Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                                  Zhang, Zemin
                                                                                                                                                                                                            Watanabe, Colin K. Williams, P. Mickey Wood, William I.
                                                                                                                                                                                                                                                                 Tumas,
                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L. Kljavin, Ivar J.
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Grimaldi, J. Christopher
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o. US20030022187A1
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Pred. No. 2.1e-123;
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PRIOR OR APPLICATION NUMBER: 60/088876
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/089105
OR FILING DATE: 1998-06-12
OR APPLICATION NUMBER: 60/089440
OR FILING DATE: 1998-06-16
OR APPLICATION NUMBER: 60/089512
OR FILING DATE: 1998-06-16
OR APPLICATION NUMBER: 60/089514 APPLICATION NUMBER: 60/088810 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088824 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088858 APPLICATION NUMBER: 60/088738 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088742 APPLICATION NUMBER: 60/088861 FILING DATE: 1998-06-11 FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088326 APPLICATION NUMBER: 60/088655 APPLICATION NUMBER: 60/088217 APPLICATION NUMBER: 60/088212 FILING DATE: 1998-06-05 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: 60/088202 APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: 60/088021 APPLICATION NUMBER: 60/084600 APPLICATION NUMBER: 60/078910 APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION NUMBER: 60/083322 FILING DATE: 1997-11-13 APPLICATION NUMBER: APPLICATION NUMBER: 60/066770 PPLICATION NUMBER: 60/087607 ILING DATE: 1998-06-02 PPLICATION NUMBER: PPLICATION NUMBER: PPLICATION NUMBER: LING DATE: 1998-06-05 LING DATE: LING DATE LING DATE: LING DATE: LING DATE: 1998-06-LING DATE: ING DATE: ING DATE: 1998-06-02 LING DATE: ING DATE: LING DATE: 1997-11-24 DATE: 1998-06-1 1998-06-10 1998-06-10 1998-06-05 1998-06-05 1998-06-09 1998-06-1998-06-04 1998-06-04 1998-06-04 1998-06-03 1998-06-02 1998-06-02 1998-05-28 1998-05-07 1998-04-28 1998-03-1998-06-04 1998-06-04 1998-06-04 60/088734 60/088167 60/088033 60/088028 60/088029 60/088026 60/088030 60/088025 60/087827 60/087759 60/087609 60/087106 60/075945

NUMBER:

60/089538

PRIOR

APPLICATION NUMBER:

60/091544

FILING DATE: 1998-07-01

FILING

DATE: 1998-07-02

1998-06-

1998-06-17

NUMBER:

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FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090862
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APPLICATION NUMBER:
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APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POI
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C17
CURRENT APPLICATION NUMBER: US/10/121,049
CURRENT FILING DATE: 2002-04-12
CURRENT FILING DATE: 2002-04-12
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 266
SEQ ID NO 266
LENGTH: 251
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US-10-121-049-266
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Best Local S
Matches 251
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Publication
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FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091978
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APPLICATION NUMBER: 60/0
FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/0
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FILING DATE: 1998-07-02
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Godowski, Paul J.
Gurney, Austin L.
Sherwood, Steven
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Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                             Baker, Kevin P.
                                                                                                                                                                Wood, William
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Gerritsen, Mary E
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                                                                                                                                                                                                               Stewart, Timothy A.
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Pred. No. 2.1e-123;
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APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C54
CURRENT APPLICATION NUMBER: US/10/123,904
CURRENT FILING DATE: 2002-04-16
Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 266
LENGTH: 251
TYPE: PRT
CORGANISM: Homo Sapien
US-10-123-904-266
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US-10-121-049-266
                                                                                                                   Query Match
Best Local Similarity
Matches 251; Conserva
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61 VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL 120
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                                                MLGARLRLWVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARNSYHLQIHKNGH 60
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                                                                                                                                                                                                                                                                                                                                                                                               Stewart, Timothy A. Tumas, Daniel Watanabe, Colin K Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Deforge, Laura
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                                                                                                                 100.0%; Silarity 100.0%; F
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                                                                                                                 Score 1360; DB 9;
Pred. No. 2.1e-123;
Mismatches 0;
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                                                                                                                                                Length 251;
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                                                        AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG 240
                                                                          AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG 240
                                                                                                                       ENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNEIPLIHFNTPIPRRHTRS 180
                                                                                                                                                                                       VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL 120
                            PEGCRPFAKFI 251
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Search completed: May 23, 2003, 07:58:43 Job time: 736 secs

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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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GenCore version 5.1.4_p5_4578 (c) 1993 - 2003 Compugen_Ltd.
          US-08-464-590A-11
US-08-462-169B-11
US-08-207-412B-14
US-08-207-412B-14
US-08-951-822-3
US-09-103-079-11
US-09-23-082A-12
US-09-03-885-11
US-09-03-885-11
US-09-03-88-951-35
US-08-441-629-15
US-08-441-629-15
US-08-776-207-15
US-08-776-207-15
US-08-776-207-15
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US-08-773-15
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US-08-867-471-11
US-08-438-439C-7
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                                                                                                                                                             Sequence 11, Appl
Sequence 7, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 11, Appl
Sequence 11, Appl
Sequence 14, Appl
Sequence 15, Appl
Sequence 11, Appl
Sequence 21, Appl
Sequence 21, Appl
Sequence 21, Appl
Sequence 35, Appl
Sequence 37, Appl
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Sequence
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        e 15, Appl
e 13, Appl
e 13, Appl
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## ALIGNMENTS

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Patent No. 5693775
GENERAL INFORMATION:
APPLICANT: Nathans, Jeremy
APPLICANT: Smallwood, Philip M.
APPLICANT: Macke, Jennifer P.
APPLICANT: Macke, Jennifer P.
TITLE OF INVENTION: FIBROBROBLAST GROWTH FACTOR HOMOLOGOUS
TITLE OF INVENTION: FACTOR-1 (FHF-1) AND METHODS OF USE
                                            Best Local Similarity
Matches 63; Conser
                                                                                                                                                                                                                        TELEFAX: 617/678-5099
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 245 amino acids
                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/
FILING DATE: 12-WAY-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Haile, Lisa A.
REGISTRATION NUMBER: 38,34
                                                                                                                                        STRANDEDNESS: not
TOPOLOGY: linear
MOLECULE TYPE: prot
                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619/678-5070
TELEPHONE: 617/678-5099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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CITY: La Jolla
STATE: CA
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42 LYTATARNSYHLQIHKNGHYDGAPHQTIYSALMIRSEDAGFYVITGVMSRRYLCMDFRGN 101
                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Fish & KICHALUSUM .... STREET: 4225 Executive Square, Suite 1400
                                              Conservative
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                                                                                                                                            protein
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                                          13.4%; Score 182.5; DB 1
29.4%; Pred. No. 6.7e-12;
ive '26; Mismatches 88
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NFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Haile, Lisa A.
REGISTRATION NUMBER: 38,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 536
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                        105
                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 07. TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                102 IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPP-----
153 -PYSQFLSRRNEIPLIHFNTPIPR-----RHTRSAEDDSERDPLNVLKPRARMTPAPA 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          212 -- ROKKOSPGDHGKM--ETLSTRATPSTQLHTGG 241
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153 - PYSQFLSRRNEIPLIHENTPIPR-----RHTRSAEDDSERDPLNVLKPRARMTPAPA 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105 LYASDHYNAE-CEFVERIHELGYNTYASRLYRTGSSGPGAQRQ--PGAQRPWYVSVNGKG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          205 SCSOELPSAEDNSPMASDPLGVVRGGRVNTHAGG 238
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                                                                                                        48
                                                                                                                                42 LYTATARNSYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGN 101
                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PPLICANT: Smallwood, Philip M.
PPLICANT: Macke, Jennifer P.
TTLE OF INVENTION: FIBROBROBLAST GROWTH
TTLE OF INVENTION: FACTOR-1 (FHF-1) AND
                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 08/439,725
FILING DATE: 12-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
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                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
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                             LYASDHYNAB-CEFVERIHELGYNTYASRLYRTGSSGPGAORO--PGAORPWYVSVNGKG 161
                                                                                                 LYCAT---KYHLOLHPSGRVNGSLENSAYSILEITAVEVGVVAIKGLFSGRYLAMNKRGR 104
                                                                                                                                                                       63;
                                                                                                                                                                                                                                                                                                         amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                Lisa A.
Lisa A.
38,347
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                                                                                                                                                                                      13.4%;
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                                                                                                                                                                       26;
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                                                                                                                                                                                   Score 182.5; DB 2
Pred. No. 6.7e-12;
                                                                                                                                                                       Mismatches
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                                                                                                                                                                       Indels
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                                                                                                                                                                                                    245;
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US-08-438-439C-7
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Haile, Lisa A.
REGISTRATION NUMBER: 38,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: 619/678-5070
TELEFAX: 619/678-5099
                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
   212
                                205
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                                                                                                                                                       102 IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPP------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
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                                                                                                                                                                                                              42 LYTATARNSYHLQIHKNGHYDGAPHQTIYSALMIRSEDAGFYVITGVMSRRYLCMDFRGN 101
                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                            ENGTH:
                            SCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGG 238
                                                                                                                       LYASDHYNAE-CEFVERIHELGYNTYASRLYRTGSSGPGAQRQ--PGAQRPWYVSVNGKG 161
                                                                                                                                                                                 LYCAT---KYHLQLHPSGRVNGSLENSAYSILEITAVEVGVVAIKGLFSGRYLAMNKRGR 104
                                                           RPRRGFKTRRTQKSSLF----LPRVLGHKDHEMVRLLQSSQPRAPGEGSQPRQR---
                                                                                          - PYSQFLSRRNEIPLIHFNTPIPR - - - - - RHTRSAEDDSERDPLNVLKPRARMTPAPA
--ROKKOSPGDHGKM--ETLSTRATPSTQLHTGG 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -- RQKKQSPGDHGKM--ETLSTRATPSTQLHTGG 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGG 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RPRRGPKTRRTQKSSLF----LPRVLGHKDHEMVRLLQSSQPRAPGEGSQPRQR
                                                                                                                                                                                                                                                    63;
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                                                                                                                                                                                                                                                                 Similarity
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                                                                                                                                                                                                                                                                                                                                                                                          245 amino acids
                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smallwood,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nathans,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM PC compatible YSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 May 12, 1995
                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                                           not relevant
                                                                                                                                                                                                                                                                13.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jeremy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38,347
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                                                                                                                                                                                                                                                 Score 182.5; DB 2;
Pred. No. 6.7e-12;
26; Mismatches 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07265/046001
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RESULT

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US-09-417-721-7; Sequence 7, Application US/09417721; Patent No. 6451303.
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US-09-417-721-7
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SOFTWARE: PatentIn Ver.
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No. 6451303
GENERAL INFORMATION:
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CURRENT APPLICATION NUMBER: US/09/417,721
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/104,103
PRIOR FILING DATE: 1998-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Whitehouse, Martha J.
APPLICANT: Kavanaugh, Michael W.
TITLE OF INVENTION: Angiogenically Effective Unit Dose of FGF and Method of
TITLE OF INVENTION: Administering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
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atent No. 5763214
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              ATTORNEY/AGENT INFORMATION:
NAME: MULLINS, J. G.
REGISTRATION NUMBER: 30,073
REFERENCE/DOCKET NUMBER: 32
                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: HU, JING-SHAN
APPLICANT: ROSEN, CRAIG A.
                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222 GKMETLSTRA--TPS 234
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162 RPRRGFKTRRTOKSSLFLPRVLGHKDHEMVRLLQSSQPRAPGEGSQPRQRRQKKQSPGDH 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                105 LYASDHYNAE-CEFVERIHELGYNTYASRLYRTGSSGFGAQRQ--FGAQRFWYVSVNGKG 161
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               153 - PYSOFLSRRNE -----
                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI.
STREET: 6 BECKER PARM FOR THE CTITY
                                                                                                                                                                     COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0
                                                                                              FILING DATE: 0:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42 LYTATARNSYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGEVVITGVMSRRYLCMDERGN 101
                                                                                                                APPLICATION NUMBER: US/08/464,590A FILING DATE: 05-JUN-1995
                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TLE OF
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                                                                                                                                                                                                                                                                                 07068
                                                                                                                                                                                                                                                                                                                                            ROSELAND
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                .325800-438
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPLIHENTP-----IPRRHTRSAEDDSER 187
                                                                                                                                                                             Version
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US-08-462-169B-11
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                                 Query Match
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                 Best Local
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Best Local Similarity 31.0%;
Matches 52; Conservative 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (201) 994-1744
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                  INFORMATION FOR SEQ ID NO:
                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                     TELEPHONE: 201-994-1700
                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION: NAME: MULLINS, J.G.
                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INC
                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      164 RRGFKTRRTQKSSLFLPRVLDHRDHEMVRQLQSGLPRPPGKGVQPRRR 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105 LYASEHYSAE-CEFVERIHELGYNTYASRLYRTVSSTPGARRQPSAERLWYVSVNGKGRP 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      154 YSQFLSRRNEIPLIHFNTPIPRRH---TRSAEDDSERDPLNVLKPRAR 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102 IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSL-----GRAKRAFLPGMNPP--P 153
                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PS,
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                STRANDEDNESS
                                                                                                                                     TYPE: AMINO ACID
                                                                                                                                                                                                      TELEFAX:
                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 33,073
                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42 LYTATARNSYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGN 101
                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
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                                                                                                                                                   ENGTH:
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1 Similarity
52; Conserv
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NEW JERSEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: CARELLA, BYRNE, BAIN, GILFILLAN
E: CECCHI, STEWART & OLSTEIN
6 BECKER FARM ROAD
                                                                                                                                                   239 AMINO ACIDS
                                                                                                                                                                                                      201-994-1744
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 John Greene and Craig A. Rosen
/ENTION: Fibroblast Growth Factor-15
                                                                                                                                                                                                                                                                                                                                                                                            WORD PERFECT 5.1
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               13.3%;
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               Score 180.5;
Pred. No. 1.
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Pred. No. 1.1e-11;
               .1e-11;
                             DB 1;
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                            Length 239;
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Matches

Conservative

Mismatches

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RESULT 8
US-08-951-822-35
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                                                                                                                                                                                                                                                                                                                                                                                                           ; MOLECULE TYPE: protein US-08-207-412B-14
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                                                                                                                                                                                                                                                                                                                       Query Match 13.3%;
Best Local Similarity 31.0%;
Matches 52; Conservative 2
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APPLICANT: Hu, Ji
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS
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                                                                               164 RRGFKTRRTQKSSLFLPRVLDHRDHEMVRQLQSGLPRPPGKGVQPRRR 211
                                                                                                                                                                                                102 IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSL-----GRAKRAFLPGMNPP--P 153
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FILING DATE: 08-MAR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                              48
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SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                              42 LYTATARNSYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGN 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 325800-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Ferraro, Gregory D
REGISTRATION NUMBER: 36,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Roseland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Carella, Byrne, ADDRESSEE: Stewart & Olste
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                     YSQFLSRRNEIPLIHFNTPIPRRH---TRSAEDDSERDPLNVLKPRAR 198
                                                                                                                                                          LYASEHYSAE-CEFVERIHELGYNTYASRLYRTVSSTPGARRQPSAERLWYVSVNGKGRP
                                                                                                                                                                                                                                        LYCAT---KYHLQLHPSGRVNGSLENSAYSILEITAVEVGIVAIRGLFSGRYLAMNKRGR 104
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Pred. No. 1.1e-11;
26; Mismatches 75;
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US-08-951-822-35
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Best Local Similarity
Matches 52; Conserv
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APPLICANT: Rosen, Craig A.
TITLE OF INVENTION: Fibroblast Growth Factor
                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 32
SOFTWARE: PatentIn Ver. 2.0
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EARLIER APPLICATION NUMBER: 08/462,169
                                                                                                                                                                                                                                                                                                                                                                                                                       EARLIER FILING DATE: 1995-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/103,079A
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CURRENT APPLICATION NUMBER: US/08/951,822A
CURRENT FILING DATE: 1997-10-16
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                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
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TYPE: PRT
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154 YSQFLSRRNEIPLIHFNTPIPRRH---TRSAEDDSERDPLNVLKPRAR 198
                                      105 LYASEHYSAE-CEFVERIHELGYNTYASRLYRTVSSTPGARROPSAERLWYVSVNGKGRP 163
                                                                             102 IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSL-----GRAKRAFLPGMNPP--P
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                                                                                                                                                                                                                       Similarity
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                                                                                                                                                                                                    Conservative
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31.0%; Pred. No. 1.1e-11;
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Pred. No. 1.1e-11;
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Best Local S
                                                                                              Sequence 21,
                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                           GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                            tent No.
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PILING DATE: 24-SEP-1996
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                          APPLICANT:
                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: peptide
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CORRESPONDENCE ADDRESS:
     PPLICANT:
                                                                                                                                                                                    164 RRGFKTRRTOKSSLFLPRVLDHRDHEMVROLOSGLPRPPGKGVQPRRR 211
                                                                                                                                                                                                                        154 YSOFLSRRNEIPLIHFNTPIPRRH---TRSAEDDSERDPLNVLKPRAR 198
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APPLICANT: Sosnowski, Barbara A.
FITLE OF INVENTION: COMPOSITIONS CONTAINING NUCLEIC ACIDS AND LIGANDS FOR THERAPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164 RRGFKTRRTQKSSLFLPRVLDHRDHEMVRQLQSGLPRPPGKGVQPRRR 211
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                                                                                              Application US/09023082A
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(206) 682-6031
Th NO: 12:
   JIMENEZ, PABLO
DUAN, D. ROXANNE
                                        RUBEN, STEVEN M.
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US-09-023-082A-21
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Best Local Similarity
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APPLICANT:
APPLICANT:
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PRIOR APPLICATION DATA:
US 08/461,195
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PRIOR APPLICATION DATA:
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CURRENT APPLICATION DATA:
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APPLICATION NUMBER: US 60/023,852
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MEDIUM TYPE: Floppy disk
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102 IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSL-----GRAKRAFLPGMNPP--P 153
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                              48 LYCAT---KYHLQLHPSGRVNGSLENSAYSILEITAVEVGIVAIRGLFSGRYLAMNKRGR 104
                                                                                                                                                                                                                                                                               TELEPHONE: 202-371-2540
                                                             42 LYTATARNSYHLOIHKNGHVDGAPHOTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGN 101
                                                                                                                                                                                                             STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C. 1100 NEW YORK AVE, NW, SUITE 600
                                                                                                  Conservative
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MOORE, PAUL A.
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SYSTEM: PC-DOS/MS-DOS
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28-FEB-1997
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                                                                                                            13.3%; Score 180.5; DB 31.0%; Pred. No. 1.1e-11
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RESULT 13
US-09-368-951-35
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US-09-093-585-11
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Best Local Similarity
Matches 52; Conserv
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APPLICATION NUMBER: US 08
FILING DATE: 05-JUN-1995
ATTORNEY/AGENT INFORMATION:
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NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                               164 RRGFKTRRTQKSSLFLPRVLDHRDHEMVRQLQSGLPRPPGKGVQPRRR 211
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                                                                                                                                                              105 LYASEHYSAE-CEFVERIHELGYNTYASRLYRTVSSTPGARRQPSAERLWYVSVNGKGRP 163
                                                                                                                                                                                                 102 IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSL-----GRAKRAFLPGMNPP--P 153
                                                                                                                                                                                                                                   48 LYCAT---KYHLQLHPSGRVNGSLENSAYSILEITAVEVGIVAIRGLFSGRYLAMNKRGR 104
                                                                                                                                                                                                                                                                   42 LYTATARNSYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGN 101
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REGISTRATION NUMBER: 30,073
REFERENCE/DOCKET NUMBER: 32
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OPERATING SYSTEM: PC-DOS/MS-DOS
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ROSEN, CRAIG A.
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US-09-368-951-35
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CURRENT FILING DATE: 1999-08-05
EARLIER APPLICATION NUMBER: 08/951,822
EARLIER FILING DATE: 1997-10-16
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TITLE OF INVENTION: NOVEL FGF HOMOLOGS
FILE REFERENCE: 96-20
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TYPE: PRT
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CURRENT APPLICATION DATA:
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                                                                ATTORNEY/AGENT INFORMATION:
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STREET:
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NAME: Haile, Lisa A.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 07:
ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 PRIICANT: Smallwood, Phillip M. PRIICANT: Macke, Jennifer P. ITLE OF INVENTION: FIBROBROBLAS
                                                                                       APPLICATION NUMBER: FILING DATE: May 1: CLASSIFICATION: 43
                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48 LYCAT---KYHLQLHPSGRVNGSLENSAYSILEITAVEVGIVAIRGLFSGRYLAMNKRGR 104
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4225 Executive Square, Suite 1400
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                                                                                          May 12, 1995
N: 435
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                                                                                                                                                                                                                                                                                                                                                                                                  FIBROBROBLAST GROWTH FACTOR HOMOLOGOUS FACTOR-2 AND METHODS OF USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13.3%; Score 180.5;
31.0%; Pred. No. 1.
                                                                                                                            US/08/438,439C
                                                                                                                                                             Release #1.0,
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                    07265/046001
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                                                                                                                                                               Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.1e-11;
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Best Local Similarity
Watches 70; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 619/678-5099
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 245 amino acids
TELEFAX: (617) 861-9540
NFORMATION FOR SEQ ID NO: 15:
                                     TELEPHONE: (617) 861-6240
                                                                                                                             CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/279,217
FILING DATE: 22-UUL-1994
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Kirschner, Marc W.
APPLICANT: Kinoshita, No. 5766923iyuki
TITLE OF INVENTION: RECEPTOR-LIGAND ASSAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            232 TPSTQLHTGG 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128 TYASRLYRTGSSGPGAQRQ--PGAQRPYYVSVNGKGRPRRGFKTRRTQKSSLF----LPR 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 126 VYHSPQYHFLVSLGRAKRAFLPGMNPP------PYSQFLSRRNEIPLIHFNTPIPR 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182 VLGHKDHEMVRLLQSSQPRAPGEGSQPRQR----
                                                                     NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: HU95-01A
                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 15-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69 ENSAYSILEITAVEVGGVAIKGLFSGRYLAMNKRGRLYASDHYNAE-CEFVERIHELGYN 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66 HQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTLENGYD 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19 MSVLR-AYPNASP-----LLGSSWGGLIHLYTATAR-----NSYHLQIHKNGHVDGAP 65
                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
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STRANDEDNESS: not
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                                                                                                                                                                                                                                                                                                                                                                                            02173
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                                                                                                                                                                                                                                                                                                                                                                                                                            Massachusetts
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                                                                                                                                                                                                                                                                                                                                                                                                            USA
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28.0%; Pred. No. 1.1e
tive 29; Mismatches
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                                                                                                                                                                                                         Best Local Similarity 35.6%; Matches 47; Conservative 1
                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
162 RPRRGFKTRRTQ 173
                                    153 -PYSQFLSRRNE 163
                                                                      105 LYASDHYNAE-CEFVERIHELGYNTYASRLYRTGSSGPGAQRQ--PGAQRPWYVSVNGKG 161
                                                                                                           102 IFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPP----- 152
                                                                                                                                               48 LYCAT---KYHLOLHPSGRVNGSLENSAYSILEITAVEVGVVAIKGLFSGRYLAMNKRGR 104
                                                                                                                                                                                  42 LYTATARNSYHLQIHKNGHYDGAPHQTIYSALMIRSEDAGFYVITGVMSRRYLCMDFRGN 101
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Pred. No. 2.2e-11;
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4.

Search completed: May 23, 2003, 07:46:21 Job time: 31 secs

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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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1360
1 MLGARLRLMVCALCSVCSMS......VNTHAGGTGPEGCRPFAKFI 251
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L: /SIDS2/gcgdata/
/SIDS2/gogdata/geneseq/geneseqp-emb1/AA1990_DAT:
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SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*
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Pred. No. is the number of results predicted by score greater than or equal to the score of the and is derived by analysis of the total score di chance to have a result being printed,

## SUMMARIES

1360   100.0   251   23   ABB06940   Human OST311   prote   1356   99.7   251   23   ABB08352   Human FGFF12 mutant   1356   99.7   251   23   ABB77582   Human FGF23 mutant   1356   99.7   251   23   ABB77583   Human FGF23 mutant   1356   99.7   251   23   AAB77584   Human FGF23 mutant   1352   99.4   251   23   AAB77585   Human FGF23 mutant   1354   99.1   251   23   AAB77585   Human FGF23 mutant   1354   99.1   251   23   AAB85829   Human FGF23 mutant   1354   99.8   227   23   AAB85829   Human FGF23 mutant   1355   90.8   227   23   AAB86952   Human FGF23 mutant   1355   90.8   227   23   AAB86952   Human FGF23 mutant   1355   90.8   227   23   AAB86952   Human Fibroblast   966   71.0   178   21   AAY85639   Human Fibroblast   97.7   251   22   AAG63945   Human Fibroblast   97.7   251   23   AAB86944   Amino acid sequenc   241   17.7   210   22   AAB86944   Human FGF23 core   s   AAB86944   Human FGF23   FGF23   FOF2   PUMAN OST311   Prote   AMB86944   Human FGF23   POTe   S   AAB86944   Human FGF23   POTE   FIDROBIAST   POTE   F
00.0 251 23 ABB06940 Human 90.0 251 23 ABB06940 Human 90.0 251 23 ABB08352 Human 99.7 251 23 ABB77582 Human 99.7 251 23 ABB77585 Human 99.7 251 23 ABB77585 Human 99.4 251 23 ABB77585 Human 99.4 251 23 ABB77585 Human 99.4 251 23 ABB77585 Human 99.1 251 23 ABB77585 Human 99.1 251 23 ABB77585 Human 99.2 7 23 ABB85821 Human 99.1 27 23 ABB86951 Human 99.8 227 23 ABB86951 Human 90.8 227 23 ABB86951 Human 90.8 229 23 ABB86951 Human 90.8 229 23 ABB86951 Human 90.8 229 23 ABB86951 Human 90.7 251 22 AAG63945 High and 70.7 251 22 AAG63945 High and 70.7 251 22 AAG63945 Human 90.8 24 23 ABB86944 Human 90.8 24 24 23 ABB86944 Human 90.8 24 24 23 ABB86944 Human 90.8 25 AAB888416 Human 90.8 26 AAB8958 Human 90.8 25 AAB89581 Human 90.8 25 AAB888416 Human 90.8 26 AAB89581 Human 90.8
23 ABB06940 Human 23 ABB07582 Human 23 ABB77582 Human 23 ABB77583 Human 23 AAU79379 Human 23 AAU79380 Human 23 AAU79380 Human 23 AAU79381 Human 23 ABB77585 Human 23 ABB77586 Human 23 ABB77586 Human 24 AAB85811 Human 25 AAB85811 Human 26 AAB8581 Human 27 AAB8581 Human 28 ABB06951 Human 29 AAB86394 Human 20 AAG63945 Human 21 AAY85639 Human 21 AAY85639 Human 22 AAG63946 Amino 23 AAU79356 Mouse 24 AB806942 Human 25 AAB6841 Human 26 AAB6841 Human 27 AAB6841 Human 28 AAB6841 Human 29 AAB6841 Human 20 AAB6841 Human 21 AAB18636 Human 22 AAB6841 Human 23 AAB1950 Human 24 AAB6841 Human 25 AAU79290 AAB7950 Murin 26 AAU79290 Human 27 AAB83991 Human 28 AAU79290 Human 29 AAB630 Human 20 AAB83991 Human 21 AAB83991 Human 22 AAB83991 Human 23 AAB13991 Human 24 AAB83931 Human 25 AAB83351 Human
3 ABB06940 Human ABB08352 Human ABB77582 Human ABB77582 Human ABB77583 Human AAU79380 Human AAU79380 Human ABB77585 Human ABB77586 Human ABB77586 Human ABB7586 Human ABB85811 Human ABB06951 Human ABB06951 Human AAV85639 ABC63945 AMCCOC AAG63946 Mootse AAV85637 Human ABB06944 Human ABB0694 Human ABB0694 Human ABB0694 Human ABB0694 Human
Human Amino
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## ALIGNMENTS

RESULT 1 AAE09459 Human; Alzheimer's disease; amyotrophic lateral sclerosis; ALS; Zollinger-Ellison syndrome; immune system disease; schizophrenia; inflammation; haematopoietic disease; anxiety; feeding disorder; aging; anorexia, depression; cardiovascular disease; sleep disorder; seizure; memory alteration; migraine; stroke; asthma; neuropathy; hypoglycaemia; sexual disorder; growth abnormality; infection; autoimmune disease; rheumatoid arthritis; cataractogenesis; angiogenesis; atherosclerosis; cerebral ischaemia; cirrhosis; Huntington's disease; Hodgson's disease; hypercholesterolaemia; headache; ammesia; cardiac arrhythmia; obesity; disabetes mellitus; glomerulonephritis; renovascular hypertension; cancer; vaccine; Homo sapiens. Human sbgFGF-19b protein. 19-NOV-2001 AAE09459; AAE09459 standard; Protein; 251 AA. (first entry) gene therapy; sbgFGF-19b gene.

14-FEB-2000; 2000US-0182172 29-FEB-2000; 2000US-0186084 18-APR-2000; 2000US-0198583 14-FEB-2001; 2001WO-US04703 23-AUG-2001. WO200160850-A1.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                        CC amyotrophic lateral sclerosis (ALS). Zollinger-Ellison syndrome, diseases (CC of the immune system, haematopoietic disease, inflammation, anxiety, CC schizophrenia, feeding disorders, anorexia, depression, social, sexual CC and rewarded behaviour, cardiovascular disease, elsep disorder, learning CC cancer, stroke, asthma, neuropathy, aging, sexual disorders, treatment of transsexuals, growth abnormalities, obesity, infections, autoimmune CC diseases (e.g. rheumatoid arthritis), cataractogenesis, angiogenesis, CC disorders associated with healthy maintenance of gastric mucosa and CC repair of acute and chronic mucosal lesion, lung carcinoma, cerebral ischaemia, atherosclerosis, cirrhosis, Huntington's disease, headache, CC congestive heart failure, cardiac arrhythmias, hypercholesterolaemia, crimensia, multiple sclerosis, Hodgson's disease, dilated cardiomyopathy, CC congestive heart failure, cardiac arrhythmias, hypercholesterolaemia, crimensia, multiple sclerosis, Hodgson's disease, dilated cardiomyopathy, CC congestive heart failure, cardiac arrhythmias, hypercholesterolaemia, crimensia, repair and non-viral hepatitis, type I and type I diabetes mellitus, CC glomerulonephritis, renovascular hyperthermia. Polypeptides of the invention are used to identify membrane bound and soluble receptors. They are also useful as vaccines for inducing an immunological response in a mammal. Polymucleotides of the invention are used in gene therapy.
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Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to secreted and membrane associated polypeptides and nucleic acid molecules encoding such polypeptides. Sequences of the invention are useful for treating diseases such as Alzheimer's disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SMIK )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        They are also valuable for chromosome localisation studies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence is a human sbgFGF-19b protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New secreted and membrane associated polypeptides for treating Alzheimer's disease, psoriasis, cancer, enterocolitis, sleep and sexual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Agarwal P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-OCT-2000;
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                                                                                                                                                                                                                                                                                                                        MLGARLRLMVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARNSYHLQIHKNGH
                                                                                              AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG
                                                                                                                                                                    ENGYDVXHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNEIPLIHFNTPIPRRHTRS
                                                                                                                                                                                                                                          VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL
                                    PEGCRPFAKFI
                                                                                                                                             ENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNEIPLIHFNTPIPRRHTRS
                                                                                                                                                                                                                     VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL
                                                                                                                                                                                                                                                                                              MLGARLRLWVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARNSYHLQIHKNGH
                                                                     AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG
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SMITHKLINE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      251 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disease, psoriasis, stroke, and asthma
                                                                                                                                                                                                                                                                                                                                                                            Conservative
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BEECHAM PLC.
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                                                                                                                                                                                                                                                                                                                                                                          <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                          Score 1360; DB 22;
Pred. No. 7.5e-131;
                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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RESULT 2 AAB85810 ID AAB8

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                                                                                                                                                                                                                                                                                    preventing, or ameliorating an FGF-23 polypeptide-related disease, condition or disorder especially autosomal dominant hypophosphatemic rickets (ADHR). They are also useful for diagnosing a pathological condition and for stimulating angiogenesis, promoting wound healing a treating disorders of the liver.
                                                                                                                                                                                                                                                                                                                                                          This represents a human fibroblast growth factor (FGF)-23 polypeptide. The DNA insert is contained in ATCC Deposit No. PTA-1617. FGF-23 can be expressed by standard recombinant methodology. The FGF-23 polypeptides, polynucleotides, modulators and antibodies are useful for treating,
                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-FEB-2000; 2000US-0182442
20-APR-2000; 2000US-0198903
15-FEB-2001; 2001US-0748581
                                                                                                                                                                                                                                                                                                                                                                                                                                                      An isolated nucleic acid molecule encoding a fibroblast gro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-514774/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Luethy R,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   angiogenesis;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ribroblast growth factor; FGF; FGF-23; osteopathic; vulnerary; ADHR;
nepatotropic; autosomal dominant hypophosphatemic rickets; human;
angiogenesis; gene-therapy; liver disorder; antisense-therapy.
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                                                                                                                                                                          MLGARLRLWVCALCSVCSMSVLRAYDNASPLLGSSWGGLIHLYTATARNSYHLQIHKNGH
                                                                                                                                                        MIGARLRIMVCALCSVCSMSVLRAYPNASPLIGSSWGGLIHLYTATARNSYHLQIHKNGH
                AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG
                                                                   ENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNEIPLIHFNTPIPRRHTRS
                                                                                                                       VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL 120
 AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG
                                                  ENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRNEIPLIHFNTPIPRRHTRS
                                                                                                       VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL
                                                                                                                                                                                                               251;
                                                                                                                                                                                                                           Similarity
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                                                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative 0,
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                                                                                                                                                                                                                                                                                                                                                                                                                            158pp; English.
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                                                                                                                                                                                                            Score 1360; DB 22;
Pred. No. 7.5e-131;
; Mismatches 0;
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CC The present sequence represents fibroblast growth factor 23 (FGF-23).

CC Human FGF-23 polynucleotides and polypeptides are useful for treating comparison to the condition of the treating comparison of the transaction of the transaction of the condition characterized by dysfunction of placental cells (e.g. congenital defects, comparison of the thymus (e.g. congenital defects).

CC fertility, or abnormal growth), a condition characterized by inadequate function of the thymus (e.g. leukemia, lymphoma, autoimmune disease, composition of the thymus, or a condition characterized by inadequate function of the thymus, or differentiation disorder of the thymus, or a condition characterized by central nervous system composition of the thymus, or a condition characterized by central nervous system composition of the thymus, or a condition characterized by central nervous system composition of disorder (e.g. Parkinson's disease or Alzheimer's disease. The human for composition of disease, healing of intestinal wounds, ulcers, inflammation, composition disorders, injuries and surgical anastomoses, motility and absorption disorders, composition or disorders, composition or disorders, composition or death of skeletal muscle cells, bone cells or supporting constitution or death of skeletal muscle cells, bone cells or supporting constitution or death of skeletal muscle cells, bone cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 12; Fig 3; 77pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Isolated nucleic acids encoding the human and murine fibroblast (factor 23, useful in the treatment of a condition characterized linadequate function of placental cells (e.g. congenital defects) the thymus (e.g. leukemia)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-MAR-2000; 2000US-0187854.
18-SEP-2000; 2000US-0233368.
05-DEC-2000; 2000US-0251649.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fibroblast growth factor 23; FGF-23; injury; placental cell; ulcer; congenital defect; fertility; abnormal growth; thymus function; leukemla; lymphoma; autoimmune disease; proliferative disorder; infarction; differentiation disorder; central nervous system disorder; infarction; Parkinson's disease; Alzheimer's disease; Crohn's disease; inflammation; intestinal wound; motility disorder; absorption disorder; stroke; congenital malformation; ischemic vascular disease; myocardial ischemia; peripheral vascular disease; renal artery disease; bone disease;
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UNIV KYOTO.
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                                   skeletal myopathies,
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                                   bone disease,
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Claim 12; Fig 3; 77pp; English

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fibroblast growth factor 23; FGF-23; injury; placental cell; ulcer; congenital defect; fertility; thymus; leukemia; lymphoma; injury; autoimmune disease; proliferative disorder; differentiation disorder; central nervous system disorder; Parkinson's disease; inflammation; Alzheimer's disease; Crohn's disease; intestinal wound; stroke; motility disorder; absorption disorder; intestinal maliformation; ischemic vascular disease; myocardia; inchemia; myocardial infarction; peripheral vascular disease; renal artery disease; skeletal myopathy; musculoskeletal disease; skeletal muscle cell; bone disease; arthritis.
                                                                       factor 23, useful in the treatment of a condition characterized inadequate function of placental cells (e.g. congenital defects) the thymus (e.g. leukemia) -
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18-SEP-2000; 2000US-0233368.
05-DEC-2000; 2000US-0251650.
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                                                                                                                                                            solated nucleic acids encoding the human and murine fibroblast
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                                                                                                                                                                                                                                                                                                                                                          CHIRON CORPUNIV KYOTO.
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Pred. No. 7.5e-131;
; Mismatches 0;
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RESULT 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The human FGF-23 polynucleotide and polypeptide are useful for treating a patient suffering from traumatic hipury or a condition characterized by dysfunction of or injury to skin cells, a condition characterized by dysfunction of or injury to skin cells (e.g. congenital defects, fortility, or abnormal growth), a condition characterized by inadequate function of the thymus (e.g. leukemia, lymphoma, autoimmune disease, the thymus, or differentiation disorder of the thymus, or differentiation disorder of the thymus, or differentiation disorder of the thymus, or a condition characterized by central nervous system disorder (e.g. Parkinson's disease or Alzheimer's disease). The human FGF-23 polynucleotide and polypeptide are also useful in the creatment of Crohn's disease, healing of intestinal wounds, ulcers, inflammation, injuries and surgical anastomoses, motility and cabsorption disease, sand congenital malformations of the intestine. They are also useful for treating ischemic vascular disease, (e.g. myocardial ischemia/infarction, peripheral vascular disease, renal cartery disease, stroke) and musculoskeletal disease characterized by loss of function, inadequate function or death of skeletal muscle cells, or are thirties.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
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 01-DEC-1999;
01-DEC-1999;
                                                  01-DEC-2000; 2000WO-US32678
                                                                                                                                                                                                               breast; prostate; cervical; tumour necrosis factor-alpha; TNF-alpha; cartilage; ear; proliferation; glucose; free fatty acid; skeletal muscle;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                           WO200140466-A2
                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                          Human
                                                                                                                                                                                                                                                                                        Human PR09828 polypeptide sequence.
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                                                                                                                                                                                                                                                     secretory and transmembrane; PRO; mammalian;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                         ear; proliferation; glucose; free fat A-peptide; factor VIIA; gene therapy.
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99WO-US28301
99WO-US28634
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Pred. No. 7.5e-131;
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06-JAN-2000;
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18-FEB-2000;
18-FEB-2000;
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02-DEC-1999;
02-DEC-1999;
09-DEC-1999;
16-DEC-1999;
20-DEC-1999;
20-DEC-1999;
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06-JAN-
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02-JUN-2000;
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30-MAR-2000;
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01-MAR-2000;
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24-FEB-2000;
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2000WO-US07532.
2000WO-US08439.
2000WO-US13705.
2000WO-US14042.
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2000WO-US15264.
2000WO-US30873.
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2000WO-US04914.
2000WO-US05004.
2000WO-US05601.
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2000WO-US00376.
2000WO-US03565.
2000WO-US04341.
2000WO-US04342.
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99WO-US30999
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D-US30095.
                                                                                                                                                                                                                                    )-US14941
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Gerritsen Smith V, , Beresini M, n ME, Goddard Stewart TA, I A, Godowa Tumas D, Deforge L, Desnoyers L, Filvaroff E, A, Godowski PJ, Gurney AL, Sherwood Tumas D, Watanabe CK, Wood WI, Zhang ŝ Gao

2001-408281/43. DB; AAS21376.

Isolated, secretory and transmembrane PRO polypeptide used to detect other PRO polypeptides, link bloactive molecules to cells expressing PRO polypeptides, and detect the presence of mammalian tumours e.g. lung, breast, prostate, cervical

Claim 12; Fig 266; 813pp; English

CC PRO polypeptides, and to detect the presence of mammalian lung, colon, CC breast, prostate, rectal, cervical or liver tumours by comparing PRO CC polypeptide expression in a cell sample to that in a control sample. CC Some of the 275 sequences are also useful to stimulate the release of CC tumour necrosis factor-alpha (TNF-alpha) from human blood, the CC proliferation or differentiation of chondrocytes, the proliferation or CC gene expression in pericyte cells, the release of proteoglycans from CC cartilage, the proliferation of inner ear utricular supporting cells or CC of T-lymphocytes, the release of a cytokine from peripheral blood CC monocytes (PBMCs), or the proliferation of endothelial cells. Some of CC the PRO polypeptides may modulate glucose or free fatty acid uptake by Skeletal muscle cells or by adipocytes; or inhibit binding of A-peptide CC to factor VIIA. The PRO polypeptides can be used in assays to identify molecules involved in binding interactions. The polymcleotides encoding CC PRO polypeptides can be used to generate probes, antisense RNA/NNA, or transparent out broad in transparent out broad in the stand on he used in peace therapy. AAU12172-AAU12446 represent novel human secretory and transmembrane PRO polypeptides. The PRO polypeptides are useful to detect other PRO polypeptides, to link bioactive molecules to cells expressing PRO polypeptides, to modulate biological activities of cells expressing or knock out animals and can be used in gene therapy.

Sequence 251 Ā

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Query Match
Best Local Similarity
  Conservative
            100.0%;
  0
Score 1360; DB 22;
Pred. No. 7.5e-131;
; Mismatches 0;
  Indels
                     Length
 0,
 Gaps
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0;

밁 Ş MLGARLRLWVCALCSVCSMSVLRAYPNASPLLGSSWGGLIHLYTATARNSYHLQIHKNGH 60 60

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RESULT 6
AAB84652
ID AABE
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                                    The present sequence represents a human fibroblast growth factor (FGF) homologue, designated zFGF12. The zFGF12 polypeptides contain a motif (see AAB84654) that occurs in all known members of the FGF family, which is unique to these proteins. This motif is highly conserved in all members of the FGF family, however, zFGF12 appears to be unique in that the conserved Glu is a His (residue 117) substituting a basic amino acid (aa) residue for an acidic aa residue. The zFGF12 gene is mapped to chromosome 12, location 12q.1.3. zFGF12 may be used in the
prevention, diagnosis and treatment of diseases associated with inappropriate FGF expression. Disorders and processes that may l prevented, diagnosed, and treated include, for example prolifer.
                                                                                                                                                                                                                                                                                                                                                                         05-JAN-2000; 2000US-0478062
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fibroblast growth factor; FGF; zFGF12; chromosome 12; 12q.1.3; neuronal cell; prostatic cell; pancreatic cell; haematopoietic cell; hyperplasia; regeneration; diabetes; amylotrophic lateral sclerosis; stroke; anglogenesis; wound healing.
                                                                                                                                                                                                                             A fibroblast growth fa
acids that encode it,
                                                                                                                                                                                                                                                                                                                    Conklin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein
                                                                                                                                                                         Claim 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
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                                                                                                                                                                                                    wound
                                                                                                                                                                                                                                                                          2001-418357/44.
DB; AAH28133.
                                                                                                                                                                                                                   diabetes,
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                                                                                                                                                                         60-61;
                                                                                                                                                                                                            rowth factor homolog polypeptide zFGF12 and the nucleic ode it, useful for preventing, diagnosing and controlling amylotrophic lateral sclerosis, strokes, angiogenesis
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25..251
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                                                                                                                                                                      English.
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RESULT 7
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Best Local S
Matches 251
                                                                                            Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety of diseases, and for diagnosis of those diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of neuronal, prostatic and pancreatic tissue cells, growth and differentiation of haematopoietic cells, hyperplasia and regeneration, diabetes, amylotrophic lateral sclerosis, strokes, angiogenesis and
                                                                                                                                                                                                                                                   08-DEC-1999; 99US-0169629
06-MAR-2000; 2000US-0187470
                                                                       Claim
                                                                                                                                                     N-PSDB; AAH64781.
                                                                                                                                                                                               Dumas Milne Edwards
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                                                                                                                                                                                                                                                                                                                                                                                                          GENSET
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                                                                    Page 828-829;
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full length GENSET human nucrear trains. The nucleic acids and the polypeptides the prevention, treatment and diagnosis of the prevention.
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potentially secreted proteins. The nucleic they encode may be used in the prevention,

The invention relates to

acids encoding

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ARBSULT 8
AAB65297
ID AAB6
XX AAB6
XX AAB6
XX AAB6
DT 02-P
XX Huma
XX Huma
XX Huma
XX Huma
XX Home
XX O2-P
XX O3-P
XX O3-P
PP 30-P
PP 
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The GENSET polypeptides may be used as antigens in the production of antibodies and in assays to identify modulators (agonists and continuous) of GENSET polypeptide expression and activity. The present sequence is a GENSET polypeptide of the invention.
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Best Local S
Matches 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; 5-711 death;
                        02-JUN-1999;
23-JUN-1999;
07-JUL-1999;
20-JUL-1999;
26-JUL-1999;
26-JUL-1999;
17-AUG-1999;
15-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
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99WO-US12252.
99US-0141037.
99US-0143048.
99US-0144758.
99US-0146598.
99US-0146529.
99US-0146529.
99US-014939.
99WO-US21990.
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Pred. No. 7.5e-131;
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The present inv
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18-FEB-2000;
22-FEB-2000;
24-FEB-2000;
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30-NOV-1999;
01-DEC-1999;
16-DEC-1999;
20-DEC-1999;
                                      sequences, and their fragments, can be used as hybridisation probes, in chromosomal and gene mapping, and in the generation of anti-sense RNA and DNA. They may also be used to produce transgenic animals which are used to develop and screen therapeutically useful reagents. The PRO nucleotide and protein sequence can be used for tissue typing and in treating cancer. Anti-PRO antibodies can be used in diagnostic assays. AAF44270 to AAF44470 represent PCR primers and hybridisation probes used in the isolation of human PRO sequences. AAF44087 to AAF44269 and AAB65154 to AAB65300 represent human PRO polynucleotide and protein
                                                                                                                                                                                                                                                                                            PRO polynucleotides used to produce polypeptides used to target bioactive molecules such as toxins, radiolabels or antibodies, specific cells, to cause targeted cell death -
                                                                                                                                                                                  The present invention describes human secreted and transmembrane PRO proteins. The PRO proteins have cytostatic activity. The PRO proteins can be used for targeted delivery of bloactive molecules, such as toxins, radiolabels or antibodies, that cause cell death. PRO nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                      Ashkenazi AJ, Baker KP, Botstein D, Desnoy, Ferrara N, Fong S, Gerber H, Gerritsen MF, Grimaldi CJ, Gurney AL, Kljavin IJ, Napier Roy MA, Stewart TA, Tumas D, Watanabe CK,
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15-MAR-2000;
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06-JAN-2000;
                            sequences
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DB; AAF44266.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENENTECH INC.
                           given in the
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2000WO-US00376
2000WO-US003565
2000WO-US04341
2000WO-US04414
2000WO-US04914
2000WO-US05004
2000WO-US05841
2000WO-US05884
2000WO-US056884
2000WO-US056884
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99WO-US28313.
99WO-US28301.
99WO-US30095.
99WO-US30911.
                            exemplification of the
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be CK, Williams
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                           present invention.
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Paoni NF;
Wood WI;
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                                                                                                                                                              VDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDFRGNIFGSHYFDPENCRFQHQTL 120
                                                            AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG
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                       PEGCRPFAKFI
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                                               AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG
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RESULT 9
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tryptophan. The mutants are generated by introducing the following base changes in the nucleic acid sequence: R176Q mutant is generated by G527A; R179Q is generated by G535A; and R179W is generated by G535T. The protein and encoding DNA are applicable in remedies for hyperphosphataemia, including gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a DNA (ABN81575) encoding a protein (ABB77581) FGF23 and mutants FGF23 comprising an amino acid substitution of arginine at position 176 to glutamine and/or position 179 to glutamine or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human FGF23 protein mutant applicable in gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 46-48; 64pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; ABN81575
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29-MAY-2001; 2001JP-0161370.
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                                                                                                                                                                                                                                    ENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQPLSRRNEIPLIHFNTPIPRRHTRS
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                                                                                                  AEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVVRGGRVNTHAGGTG
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Pred. No. 7.5e-131;
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RESULT 10
AAU79355
                                                                                                                                               The invention describes an isolated polypeptide (I) comprising a fibroblast growth factor 23 (FGF23) polypeptide or its mutant, variant, homologue or fragment. (I) is useful for treatment of a hypophosphataemic disorder such as autosomal dominant hypophosphataemic rickets (ADHR), x-linked hypophosphataemic rickets (XLH), hereditary hypophosphataemic rickets with hypercalciuria (HHRH), hypophosphataemic bone disease (HBD), epidermal nevus syndrome, fibrous dysplasia tumour induced osteomalacia (TIO), and nephrolithiasis. (I) can also be used in treatment of a hyperphosphataemic disorder such as mild renal insufficiency and tumoural calcinosis. Osteoporosis, conditions (e.g., dermatomyositis) involving deposition of calcium and phosphate in the arteries or soft tissues of mammal converse artery disease may also be treated using methods.
                                            mammal, coronary artery disease may also be treated using methods described in the invention. Preferably, the nucleic acid or the polypeptide comprises a mutation that confers increased stability on FGF23 polypeptide. The polynucleotide encoding (I) can be used in gene therapy to treat diseased individuals. This is the amino acid sequence of the novel human fibroblast growth factor 23 (FGF23) studied in the
                                                                                                                                                                                                                                                                                                                                                                                                                        Novel fibroblast growth factor 23, and polynucleotides encoding the polypeptides, useful for treating hyperphosphataemic disorders such mild renal insufficiency or tumoural calcinosis, or coronary artery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pibroblast growth factor 23; PGPP23; hypophosphataemic disorder; autosomal dominant hypophosphataemic rickets; ADHR; fibrous dysplasia; X-linked hypophosphataemic rickets; XLH; tumour induced osteomalacia; TIO; hereditary hypophosphataemic rickets with hypercalciuria; HHRH; hypophosphataemic bone disease; HBD; epidermal nevus syndrome; nephrolithiasis; hyperhosphataemic disorder; mild renal insufficiency; tumoural calcinosis; osteoporosis; dermatomyositis; human.
                                                                                                                                                                                                                                                                                                                                                                         Claim 3; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
                                  invention
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/note= "Fibroblast growth factor
176.179
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Best Local Similarity
Matches 251; Conserv
 The present invactivities of i calcification,
                                                                                            Polypeptides useful for regulating phosphate transport and calcium metabolism and DNA encoding them for treatment of phosphate and calcium metabolism disorders, including bone formation abnormalities and kidney
                                                          Claim
                                                                                                                                                                                                                                                       11-AUG-2000; 2000JP-0245144.
21-SEP-2000; 2000JP-0287684.
22-DEC-2000; 2000JP-0391077.
19-APR-2001; 2001JP-0121527.
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                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OST311; phosphoric acid metabolism; calcium metabolism; calcification; vitamin D metabolism; hypophosphataemia; phosphate transport; cytostatic; chromosome 12p13; osteopathic; nephrotropic; antihyperphosphataemic; phosphorus transport; skeletal disorder; bone cancer; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUN-2002
                                                                                                                                                                                                Yamashita
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human OST311 protein sequence SEQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      bone formation abnormality; vitamin D resistance; Paget's disease;
bone calcium deficiency; kidney disorder; kidney function deficiency;
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                                                                                                                                                                                                                                                                                                                                                                                                                                            phosphate leakage; urinary tubule acidosis; Fanconi's
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invention describes DNA encoding a polypeptide having the of inhibiting hypophosphataemia, phosphate transport and on, and regulating vitamin D metabolism in vivo. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 1360; DB 23; ilarity 100.0%; Pred. No. 7.5e-131; Conservative 0; Mismatches 0;
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Best Local (
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epithelial cell; mesenchymal cell.
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The invention relates to a fibroblast growth factor polypeptide, designated zFGP12, comprising a sequence at least 95 % identical to residues 25 to 251 of the 251 amino acid at least 95 % identical to specification. The activity of the fibroblast growth factor of the invention may be described as vulnerary. zFGP12 can be used to promote wound healing of the epidermis, to protect and promote recovery of epithelial cells in the gastrointestinal tract, small intestine and ora
                                                                                                         healing, protecting and stimulor radiation, and stimulating
                                                                                                                                                                                                                                       04-JAN-2001; 2001US-0754634
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       Human FGF23 protein mutant applicable in gene therapy
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29-MAY-2001;
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                                                                                                                                                                                                                                                             Synthetic.
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                                                                                                                                                                                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mucosa after chemotherapy or radiation, and to stimulate lung epithelial cells after lung injury or complications in neonates following premature birth. The polypeptide can also be used to modulate proliferation and function of epithelial cells of prostate, cornea, mammary and kidney tissue. The polypeptide is also useful to stimulate proliferation of cultured mesenchymal cells and to identify new family members. The
                                                                                                                                                                                         WO200252009-A1
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Matches 250
                              26-DEC-2000;
29-MAY-2001;
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                                                                                        04-JUL-2002.
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                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a DNA (ABN81575) encoding a protein (ABB77581) FGF23 and mutants FGF23 comprising an amino acid substitution of arginine at position 176 to glutamine and/or position 179 to glutamine or tryptophan. The mutants are generated by introducing the following base changes in the nucleic acid sequence: R1760 mutant is generated by G527A; R179Q is generated by G536A; and R179W is generated by C535T. The protein and encoding DNA are applicable in remedies for hyperphosphataemia, including gene therapy. The present sequence is that
                                                                                                            WO200252009-A1
                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                     mutein.
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       (CHUS ) CHUGAI SEIYAKU KK
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                                                                                                                                                                                                                                                       mutant R179Q
                              2000JP-0396316.
2001JP-0161370.
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Pred. No. 1.9e-130;
1; Mismatches 0;
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Of a FGF23 mutant of the invention.

Note: The present sequence is not shown in the specification derived from the wildtype human FGF23 sequence given as SEQ I forwance listing (ABB77581).
                                                                                                                                               mutein.
                                                                                                                                                                                        hypophosphataemic bone disease; HBD;
nephrolithiasis; hyperphosphataemic
                                                                                                                                                                                                        autosomal dominant hypophosphataemic rickets, ADHR; fibrous dysplasia, X-linked hypophosphataemic rickets; XLH; tumour induced osteomalacia; XTIO; hereditary hypophosphataemic rickets with hypercalciuria; HHRH; hypophosphataemic bone disease; HBD; epidermal nevus syndrome;
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                                                                                                                                                                                                                                                                                                                                                                    Human fibroblast growth factor-23 (FGF23), R176Q mutant
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein;
                                                                                                                                                                 osteoporosis; dermatomyositis; human; mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              251
                                                                                                                                                                                                                                                                                                                   FGF23; hypophosphataemic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1356; DB 23;
Pred. No. 1.9e-130;
1; Mismatches 0;
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                                                                                                                                                                                              disorder; mild
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                                                                                                                                                                                      renal insufficiency;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              251;
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Homo sapiens. Synthetic.

Misc-difference

Location/Qualifiers

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Query Match
Best Local Similarity
Matches 250; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  manmal, coronary artery disease may also be treated using methods described in the invention. Preferably, the nucleic acid or the polypeptide comprises a mutation that confers increased stability on FGF23 polypeptide. The polynucleotide encoding (I) can be used in gene therapy to treat diseased individuals. This sequence represents a mutant of the novel human fibroblast growth factor 23 (FGF23) used to study residues in the predicted protease cleavage site. Note: This sequence does not appear in the specification but has been created from the wild type sequence shown in AAU79355 using information given in example 1 of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention describes an isolated polypeptide (I) comprising a fibroblast growth factor 23 (FGF23) polypeptide or its mutant, variant, homologue or fragment. (I) is useful for treatment of a hypophosphataemic disorder such as autosomal dominant hypophosphataemic rickets (ADHR), x-linked hypophosphataemic rickets (XLH), hereditary hypophosphataemic rickets with hypercalciuria (HHRH), hypophosphataemic bone disease (HBD), epidermal nevus syndrome, fibrous dysplasia tumour induced osteomalacia (TIO), and nephrolithiasis. (I) can also be used in treatment of a hyperphosphataemic disorder such as mild renal insufficiency and tumoural calcinosis. Osteoporosis, conditions (e.g., dermatomyositis) involving deposition of calcium and phosphate in the arteries or soft tissues of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel fibroblast growth factor 23, and polynucleotides encoding the polypeptides, useful for treating hyperphosphataemic disorders such mild renal insufficiency or tumoural calcinosis, or coronary artery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-329399/36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disease
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PEGCRPFAKFI 251
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          251 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99.7%; Score 1356; DB 23; 99.6%; Pred. No. 1.9e-130; tive. 1; Mismatches 0;
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